



This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

Usage guidelines

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

- + *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.
- + *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.
- + *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.
- + *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at <http://books.google.com/>

614,0479
74
7192
FIFTH ANNUAL REPORT

B496215c

OF

The Department of Public Health

Dup. 1924

D. of D.

JULY 1, 1921

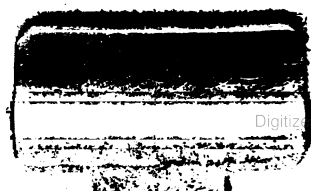
TO

JUNE 30, 1922



ISAAC D. RAWLINGS, M. D., Director

(Reprinted from the Fifth Administrative Report. Printed by authority of the
State of Illinois.)



FIFTH ANNUAL REPORT

OF

**The Department of
Public Health**

JULY 1, 1921

TO

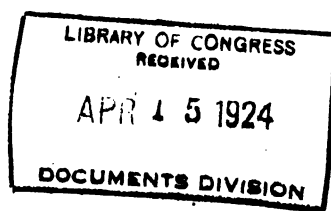
JUNE 30, 1922

ISAAC D. RAWLINGS, M. D., Director



ILLINOIS STATE JOURNAL CO
SPRINGFIELD, ILLINOIS
1923

80909—500



LETTER OF TRANSMITTAL.

To the Governor:

In compliance with the provisions of the Civil Administrative Code, I have the honor to submit to you the accompanying report of the Department of Public Health for the fiscal year, July 1, 1921, to June 30, 1922. The report covers briefly the activities of the various divisions of the department during the fiscal period.

Respectfully submitted,

ISAAC D. RAWLINGS, M. D., *Director.*

STATE OF ILLINOIS.
THE DEPARTMENT OF PUBLIC HEALTH.

ISAAC D. RAWLINGS, M. D., *Director.*
THOMAS H. LEONARD, M. D., *Assistant Director.*
AMOS SAWYER, *Chief Clerk.*

DIVISION OF PUBLIC HEALTH INSTRUCTION.

BAXTER K. RICHARDSON, *Chief.*

DIVISION OF COMMUNICABLE DISEASES.

JOHN J. MCSHANE, M. D., DR. P. H., *Chief.*

DIVISION OF TUBERCULOSIS.

THOMAS H. LEONARD, M. D., *Acting Chief.*

DIVISION OF SANITATION AND ENGINEERING.

HARRY F. FERGUSON, *Chief Engineer.*

DIVISION OF VITAL STATISTICS.

SHELDON L. HOWARD, *Registrar.*

DIVISION OF CHILD HYGIENE AND PUBLIC HEALTH NURSING.

C. W. EAST, M. D., *Chief.*

DIVISION OF DIAGNOSTIC LABORATORIES.

THOMAS G. HULL, PH. D., *Chief.*

DIVISION OF HOTEL AND LODGING HOUSE INSPECTION.

W. W. MCCULLOUGH, *Superintendent.*

DIVISION OF SOCIAL HYGIENE.

C. C. COPELAN, M. D., *Chief.*

THE DEPARTMENT OF PUBLIC HEALTH.

ISAAC D. RAWLINGS, M. D., *Director.*

At the opening of the fifth fiscal year under the Civil Administrative Code the present Director had been in office five months. The period (July 1, 1921-June 30, 1922) covered by this report may, therefore, be said to represent the first full year of his administration as the chief public health executive in the State.

The policies, the program and the activities of the department have been evolved and carried out with but a single purpose in view—the saving of human lives. They have been in line with the latest and most scientific thought on public health administration. They have been as extensive, as adequate and as effective as was humanly possible with the limited funds appropriated for protecting the lives and the health of Illinois citizens through preventive and control measures.

The most important functions of the department are (1) the prevention and control of diseases; (2) the promotion of sanitation, especially as it pertains to water supplies and sewage disposal; (3) the collection and recording of vital statistics; (4) the promotion of maternity, infant and child hygiene; (5) the operation of a free diagnostic laboratory; (6) public health education; and, (7) the supervision and extension of public health nursing service.

It is a source of a keen sense of pleasure to report that the State has enjoyed a freedom from any epidemic of serious proportion, although the prevailing economic depression and flood conditions would have indicated the reverse; that the general mortality rate was one of the lowest on record, while more than twenty thousand fewer cases and more than two thousand fewer deaths from communicable diseases were reported than during the preceding year; that very gratifying advances and extensions were made in all the other fields of activity mentioned above. Detailed discussions and statistics relative to each may be found in the divisional reports attached hereto.

ORGANIZATION.

Two things of outstanding importance during the year were the appointment by the Governor of an active Board of Public Health Advisors and the recruiting of qualified persons to fill technical positions. Both have influenced enormously the character and extent of work accomplished.

The Board of Public Health Advisors is made up largely of eminent experts in public health and its counsel and advice have been of ines-

timable value to the department. It met quarterly with the Director in various parts of the State where proximity to problems of sectional importance made possible the greatest efficiency in its function. At the close of the year the members were Dr. William A. Evans, Chicago; Dr. John Dill Robertson, Chicago; Dr. E. P. Sloan, Bloomington; Dr. C. W. Lillie, East St. Louis; Mrs. E. N. Monroe, Quincy. The board is the first of its kind to take an active part in the public health affairs of the State.

Perhaps of greater importance than the functioning of the Advisory Board was the increase in personnel. Twenty physicians employed in the capacity of district health superintendents enabled the department to handle field problems with a dispatch that contrasts favorably with that of previous years when only five such men were available. A number of other positions, including that of assistant director, and vacancies of long standing, especially in the divisions of Child Hygiene and Public Health Nursing and of Sanitation and Engineering, have also been filled.

When the year closed the department personnel was almost up to its limit as provided by law and its organization consisted of the following divisions:

- Executive Division
- Division of Public Health Instruction
- Division of Communicable Diseases
- Division of Tuberculosis
- Division of Sanitation and Engineering
- Division of Vital Statistics
- Division of Child Hygiene and Public Health Nursing
- Division of Diagnostic, Biological and Research Laboratories
- Division of Social Hygiene
- Division of Lodging House Inspection

EXECUTIVE CONFERENCES.

To the end that a close and harmonious relationship might exist between the department and the many other agencies doing work of a public health nature, the Director has held numerous conferences both within and out of the State. Representatives of the International Health Board, the U. S. Public Health Service, the American Red Cross, the Illinois Tuberculosis Association, the Illinois Medical Society and the Illinois Federation of Women's Clubs are among those who pledged cooperation and this has been secured, in most cases, to a marked degree. The result is that practically all organizations engaged in any kind of public health activity in the State now tend not only to operate with a common aim—the saving of lives and the prevention and alleviation of suffering—but to carry on in a cooperative manner that renders the greatest service to the greatest number with the least expenditure of time, money and effort.

In this connection it is timely to add that a well equipped, all-time county health unit was established in Morgan County, an all-time and well qualified health officer was chosen in Quincy and a number

of local public health nursing services were installed through the influence of the department.

As a result of conferences with other departments of the State and city governments a model milk ordinance, the adoption and enforcement of which will guarantee safe milk supplies for municipalities, was drafted. A campaign looking toward its adoption by the municipal governments of the State has already met with considerable success.

Within the department the Director has held weekly conferences with his division chiefs. It is thus seen that a coordination between all outside and departmental public health transactions of importance has been constantly maintained.

ACTIVITIES.

Stimulated by the prospects of receiving considerable funds from the National Government under the provisions of what is commonly known as the Sheppard-Towner Act, a comprehensive program that surpassed anything of the kind ever before planned out for Illinois was developed and presented to the proper Federal authorities who promptly endorsed it. Due to legal difficulties, however, the State Treasurer was unable to accept the Federal funds without legislative action so that the program cannot be carried out to any large extent until sufficient money is made available. In spite of this situation, however, a great deal of invaluable infant and child hygiene service has been done through the 25 reconstruction clinics maintained especially for crippled children and through the supervisory nursing service that has influenced the installing of many local public health nurses and the holding of scores of better baby conferences.

VITAL STATISTICS.

In the field of vital statistics a very marked advancement was made. Birth registration, due to a persistent and well directed campaign, increased in completeness enough to justify a request for a test by the Federal authorities to determine whether Illinois is now eligible for the U. S. Birth Registration Area. Mortality statistics as they relate to children less than a year old and to the puerperal state, have been tabulated in practical form for the first time while other statistical records for which there is constant demand have been brought more nearly up to date and made available for the public.

HEALTH EDUCATION.

Public health education, upon which rests much of the ultimate success of public health measures, has been carried on with unusual vigor. The monthly bulletin which is devoted to popular discussions of preventive and control methods and to a review of the morbidity and mortality situation, has been published with the regularity of a com-

mercial periodical. Thousands of reprints of the most important articles have been made and distributed.

The elaborate exhibit equipment has been overhauled and added to and has been displayed in 35 different places before more than two million people. This represents more than one-third of the total number of showings made with the equipment in nine years.

Educational conferences of a public or semi-public nature have been held throughout the State. In Chicago a meeting devoted to venereal diseases and allied subjects attracted 1,000 people and was rated by the U. S. Public Health Service as the largest and one of the most successful of 20 events of the kind held in different central points in the country. A series of five conferences with a varied program were held in the southern part of the State and each was very successful in attracting public interest. Over sixty better baby conferences were held, mostly in connection with local fairs, and numerous speaking engagements filled by the different members of the department staff. In December the first school of instruction for health officers that was ever scheduled by the department was conducted.

SANITATION.

Sanitary achievements of unusual interest that were accomplished during the year embrace activities in the flooded areas, mosquito eradication work and investigation of river pollution along bathing beaches. Measures adopted and put into effect by the department during the spring of 1922 when the larger streams of the State over-flowed their banks and drove thousands of people from their homes, endangering water supplies and disrupting the ordinary means of maintaining sanitary surroundings, terminated so successfully that no epidemic of any kind appeared among the people affected.

Mosquito eradication for the purpose of eliminating malaria was undertaken and is still progressing in Jackson County. The International Health Board, the Illinois Central Railway Company and local officials and organizations have been prevailed upon to render invaluable cooperation in this important piece of work. Its purpose is not only to bring relief from malaria to the people immediately concerned, but to demonstrate to the population of the entire malaria belt of the State that it is a good economic as well as a good public health investment to eradicate the malaria-carrying mosquito.

An important piece of sanitary work was accomplished along the Fox River where hundreds of families and thousands of bathers find relief from the summer heat. Attention was directed to the pollution of the stream when some six or eight cases of typhoid fever appeared among those who bathed therein. Investigations revealed that occupants of summer cottages invariably emptied their sewage into the river so that the beach water was highly contaminated. Measures have been

put into operation for cleaning up the situation and the opening of another vacation season will find the stream safe for bathing along the districts covered.

The sanitary engineering service rendered by the department in connection with public water supplies and sewage systems was of greater volume than in any preceding year. This was due in part to a larger personnel than was formerly available.

COMMUNICABLE DISEASES.

Communicable diseases have been the subject of much thought and attention. Investigations by members of the field staff have been made promptly wherever reports showed that epidemics were likely to develop and in all places where control and preventive action was indicated.

This type of work was supplemented by the inauguration of a medical school inspection service. District superintendents visited approximately one hundred schools (mostly rural) per month and examined over forty thousand pupils during the last half of the year. The significance and value of this work can scarcely be over emphasized. Doubtless many lives were saved and much sickness prevented.

Fifteen typhoid fever carriers were located and placed under observation sufficiently rigid to prevent them from engaging in activities that would endanger the health and lives of their fellow beings. The importance of this single piece of work is the more readily appreciated when it is remembered that three of the carriers discovered were in the milk business and that as many epidemics were traced to them as a source.

Diphtheria continues to be one of the difficult communicable diseases to eliminate in spite of the fact that its causative agent is well known to the medical profession and that there are specific methods available for its cure and prevention. A very hopeful and encouraging sign in this connection, however, is found in the decline in the percentage of fatalities. During the year only 6.2 per cent of the cases reported terminated in death as compared with 7.4 per cent for the preceding year. This was doubtless due to the propaganda of the department urging parents and physicians to cooperate in applying early treatment and to the free distribution of antitoxin. At the time of this writing a campaign has been launched for the purpose of popularizing the use of toxin-antitoxin as a means of preventing diphtheria and its progress gives hopeful anticipation that the solution of the diphtheria problem is near at hand.

LABORATORY SERVICE.

The diagnostic laboratory service expanded to a marked degree. The total number of specimens examined jumped from 59,969 in the preceding fiscal year to 92,072 or an increase of more than sixty per cent.

In addition to this the laboratory force carried out a number of important field investigations particularly in connection with milk and water-borne epidemics. The one at Kewanee where a typhoid carrier, the source of some twenty-five secondary cases was discovered is particularly noteworthy.

The laboratory force has also done considerable research work in reference to communicable diseases.

CONCLUSION.

There is no better way to conclude than to commend for thoughtful consideration the detailed reports that follow. They are presented with a full confidence that the Department of Public Health has rendered a service second to none in public benefits that reflect credit alike upon the State itself and upon the present administration.

GENERAL OFFICE.

Appropriated for	Fiscal year ended June 30, 1922.			
	Apportionment of biennial appropriation.	Bills paid.	Balance.	Bills unpaid.
Salaries and wages.....	\$20,220	\$16,802	\$3,418	-----
Office expense.....	1,425	1,395	30	\$27
Travel.....	2,500	2,093	407	37
Operation.....	315	8	307	-----
Repairs and equipment.....	2,899	799	2,100	-----
Contingent.....	6,000	-----	6,000	-----
Sub-total.....	\$33,359	\$21,097	\$12,262	\$64
Printing.....	20,500	20,207	293	-----
Total.....	\$53,859	\$41,304	\$12,555	\$64

Receipts from all sources July 1, 1921, to June 30, 1922, none.

COMMUNICABLE DISEASES.

Salaries and wages.....	\$128,040	\$77,872	\$50,168	-----
Office expense.....	2,280	1,974	306	\$ 12
Travel.....	40,700	17,404	23,296	2,268
Operation.....	110	90	20	-----
Repairs and equipment.....	825	724	101	-----
Total.....	\$171,955	\$98,064	\$73,891	\$2,280

Receipts from all sources July 1, 1921, to June 30, 1922, none.

DIAGNOSTIC LABORATORY.

Salaries and wages.....	\$18,920	\$16,924	\$1,996	\$230
Office expense.....	485	365	120	1
Travel.....	500	538	—38	-----
Operation.....	4,135	4,672	—537	30
Repairs and equipment.....	1,940	176	1,764	-----
Total.....	\$25,980	\$22,675	\$3,305	\$261

Receipts from all sources July 1, 1921, to June 30, 1922, none.

TUBERCULOSIS.

Appropriated for	Fiscal year ended June 30, 1922.			
	Apportionment of biennial appropriation.	Bills paid.	Balance.	Bills unpaid.
Salaries and wages.....	\$4,200	\$962	\$3,238	-----
Repairs and equipment.....	25	6	19	-----
Total.....	\$4,225	\$968	\$3,257	-----

Receipts from all sources July 1, 1921, to June 30, 1922, none.

SANITATION.

Salaries and wages.....	\$35,500	\$31,924	\$3,576	-----
Office expense.....	1,400	1,331	69	\$ 20
Travel.....	6,000	4,782	1,218	121
Operation.....	1,710	916	794	4
Repairs and equipment.....	2,690	902	1,788	-----
Total.....	\$47,300	\$39,855	\$7,445	\$145

Receipts from all sources July 1, 1921, to June 30, 1922, none.

VITAL STATISTICS.

Salaries and wages.....	\$31,000	\$29,756	\$1,244	-----
Office expense.....	2,000	2,107	—107	\$ 4
Travel.....	4,000	3,462	538	92
Operation.....	35	-----	35	-----
Repairs and equipment.....	1,365	312	1,053	-----
Total.....	\$38,400	\$35,637	\$2,763	\$96

Receipts from all sources July 1, 1921, to June 30, 1922, \$126.35.

LODGING HOUSE INSPECTION.

Salaries and wages.....	\$12,200	\$9,800	\$2,400	-----
Office expense.....	3,000	2,568	432	-----
Travel.....	300	25	275	-----
Operation.....	25	-----	25	-----
Repairs and equipment.....	650	305	345	-----
Contingent.....	600	-----	600	-----
Total.....	\$16,775	\$12,698	\$4,077	-----

Receipts from all sources July 1, 1921, to June 30, 1922, none.

BIOLOGICAL LABORATORY.

Salaries and wages.....	\$ 7,980	\$ 7,197	\$ 783	-----
Office expense.....	960	919	41	-----
Travel.....	300	160	140	\$6
Operation.....	46,845	59,018	—12,173	-----
Repairs and equipment.....	2,730	481	2,249	1
Total.....	\$58,815	\$67,775	—\$8,960	\$7

Receipts from all sources July 1, 1921, to June 30, 1922, none.

THE DEPARTMENT OF HEALTH.

PUBLIC HEALTH INSTRUCTION.

Appropriated for	Fiscal year ended June 30, 1922.			
	Apportionment of biennial appropriation.	Bills paid.	Balance.	Bills unpaid.
Salaries and wages.....	\$6,300	\$5,847	\$ 453	-----
Office expense.....	1,415	2,607	—1,192	\$20
Travel.....	1,000	689	311	-----
Operation.....	755	214	541	-----
Repairs and equipment.....	2,175	254	1,921	67
Total.....	\$11,645	\$9,611	\$2,034	\$157

Receipts from all sources July 1, 1921, to June 30, 1922, none.

SOCIAL HYGIENE.

Salaries and wages.....	\$30,000	\$32,641	\$—2,641	-----
Office expense.....	3,000	4,773	—1,773	\$379
Travel.....	12,000	5,612	6,388	240
Operation.....	31,000	32,601	—1,601	375
Repairs and equipment.....	1,600	1,282	318	15
Contingent.....	22,400	-----	22,400	-----
Total.....	\$100,000	\$76,809	\$23,061	\$1,009

Receipts from all sources July 1, 1921, to June 30, 1922, none.

CHILD HYGIENE AND PUBLIC HEALTH NURSING.

Salaries and wages.....	\$22,600	\$15,566	\$7,034	-----
Office expense.....	530	1,022	492	\$ 8
Travel.....	10,000	7,406	2,594	579
Operation.....	70	-----	70	-----
Repairs and equipment.....	615	18	597	124
Total.....	\$33,815	\$24,012	\$9,803	\$711

Receipts from all sources July 1, 1921, to June 30, 1922, none.

RABIES.

Salaries and wages.....	\$2,000	\$1,025	\$975	\$240
Total.....	\$2,000	\$1,025	\$975	\$240

Receipts from all sources July 1, 1921, to June 30, 1922, none.

RECAPITULATION.

Salaries and wages.....	\$318,960	\$246,316	\$72,644	\$ 470
Office expense.....	16,495	19,061	—2,566	541
Travel.....	77,300	42,171	35,129	3,343
Operation.....	85,000	97,519	—12,519	409
Repairs and equipment.....	17,514	5,259	12,255	207
Contingent.....	29,000	-----	29,000	-----
Sub-total.....	\$544,269	\$410,326	\$133,943	\$4,970
Printing.....	20,500	20,207	293	-----
Sub-total.....	\$564,769	\$430,533	\$134,236	\$4,970
Salaries, State officers.....	15,200	11,850	3,350	-----
Total.....	\$579,969	\$442,383	\$137,586	\$4,970

Receipts from all sources July 1, 1921, to June 30, 1922, \$126.35.

DIVISION OF PUBLIC HEALTH INSTRUCTION.

BAXTER K. RICHARDSON, *Chief.*

Comparative figures representing the activities of the Division of Public Health Instruction during the fiscal years ending June 30, 1921 and 1922 show a marked increase in favor of the latter. Not only has there been an increase in all regular functions but a number of new projects have been undertaken and accomplished. The tabular data found elsewhere in this report bear witness of these facts.

The growth and extension in functions of the division resulted from a two-fold cause. A larger program was mapped out at the beginning of the year and public demands for health educational service have steadily multiplied. The latter is in line with a nation-wide popular sentiment favorable to public health measures, a thing attested to by innumerable articles in popular periodicals and by regular space devoted to public health topics in the leading daily newspapers.

MONTHLY BULLETIN.

"Health News" came from press each month of the year with the regularity of a commercial magazine. This is an achievement no less new to Illinois than it is foreign to any other state and one which has added tremendously to the educational value and to the popularity of the bulletin. Its pages have carried discussions on a wide range of public health topics and particularly upon problems and subjects of immediate and especial interest to the citizens of Illinois. Diseases of seasonal importance have been described in popular language and the scientifically approved means of their prevention and control have been set forth. The more important statistical data pertaining to health conditions have been collected and published. In short the 15,000 readers of "Health News" have been fully and promptly informed on all public health subjects of current importance in the State and have had added to this the presentation of scientific matter helpful to the cause of preventive medicine. Proof that the bulletin meets adequately its purpose is found in the numerous letters of congratulation and commendation that have come from persons well informed in the field of public health and who rank high in their chosen field of occupation. It is also significant that more than one thousand new names were added to the mailing list as a result of individual requests.

SPECIAL BULLETINS.

During the year covered by this report new pamphlets or revised editions have been published on 10 different subjects. These cover problems connected with sanitary public and private water supplies, sanitary sewage disposal, safe milk supplies, the promotion of maternity and child hygiene, the eradication of house flies, the prevention and control of diphtheria and the functions of the department. Of these and other special pamphlets upwards of one hundred sixty-six thousand were distributed during the year in response to specific requests. This number added to the total number of copies of "Health News" distributed makes a grand total of 340,004 pieces of literature that were placed in the hands of interested persons through the function of this division alone.

PRESS SERVICE.

Every Friday morning two pages of press matter on public health subjects are forwarded to the 800 daily and weekly newspapers of the State. Something over three hundred of the papers use this material regularly while many of the others give liberally of their space at frequent intervals. Very often this press matter is made the subject of an editorial in the leading papers of the State.

As an indication of how wide the newspaper matter prepared by the department is used, the following tabulation is presented. The figures represent scrapbook pages of newspaper printed matter that were received by the department through its clipping service. They relate to two special annual events, Health Promotion Week and the State Fair Better Baby Conference. The clippings were of matter furnished to the newspapers by this division.

PAGES OF NEWSPAPER PUBLICITY RECEIVED THROUGH CLIPPING SERVICE.

	1920	1921	1922
Pages on State Fair Baby Conference.....	17	21	43
Pages on Health Promotion Week.....	20	79	135
TOTAL	37	100	177

In addition to the weekly press service special newspaper copy is prepared and furnished to the various news syndicates and agencies for release. These always deal with important topics of immediate public interest and consequently enjoy a much wider range of publicity than the weekly stories. During the year 153 of these specially prepared articles have been given to the press and several volumes of clippings show that they were widely utilized throughout the State. Short items of news value are also supplied regularly to the leading Illinois and national medical and public health journals.

The fourth annual report of the department was compiled and edited in this division.

EXHIBITS AND DEMONSTRATIONS.

The most impressive way to present fundamental health lessons to the public is without doubt through the agency of mechanical models. When properly constructed and presented they attract attention from the most casual observer and indelibly impress their message upon his mind.

In view of this fact the exhibit equipment of the department has been considerably increased during the past year so that demands for such material may be more readily met. At the time of this writing the equipment on hand is believed to constitute one of the best and most complete exhibits of the kind in the country. It is extensive enough to permit three or four displays at one time.

For nine years the department has maintained an outfit of mobile exhibit equipment in a loan service. In that time it has been shown nearly one hundred times in 52 different localities. Of the total number of showings 35 were made under the direction of this division during the fiscal year ending June 30, 1922. This explains the urgent need of a supervisor of exhibits—for that job has grown to be an all-time proposition.

Of the exhibits made during the year three or four are worthy of special mention. These are treated individually below.

PAGEANT OF PROGRESS.

The Pageant of Progress, a mammoth exposition staged on the Municipal Pier in Chicago during the second month of the fiscal year, was built up around health exhibits and demonstrations. Among the largest, the most interesting and instructive of these was that displayed by the State Department of Public Health under the direction of this division. More than a million people saw the department exhibit that occupied 1,600 square feet of space. Over fifteen thousand persons stopped at the various booths to study the health principles that were graphically presented and to leave their names for literature on special subjects.

STATE FAIR.

Perhaps more important than that at the Pageant of Progress was the health exhibit of the department at the State Fair. Not so many people saw the display here as at the Pageant, but they came from a wider range of down-State territory where education along public health lines is more greatly needed than in Chicago. The exhibit was far more complete than ever before, consisting as it did of many new models that were supplemented by a wealth of posters, wall panels and motion pictures. It covered the entire east end of the balcony in the Exposition Building whither thousands of visitors found their way.

A pilgrimage through the southern part of the State constituted one of the most unique events of the year in health educational work.

During April and May of 1922, the greater part of the exhibit equipment was sent to Carbondale, Harrisburg, Benton, Marion and Centralia. Combined with the display of the exhibit equipment was a program embracing lectures, demonstration clinics for the tuberculous, the crippled and those affected with trachoma, and better baby conferences. The project lasted for three days in each place and commanded popular attention to the degree that scarcely a citizen in any community concerned failed to feel its influence. The project was a means of coming into contact with a large population that is not only backward in adopting public health measures but is in particular need of them.

HEALTH PROMOTION WEEK.

Health Promotion Week which has become an annual event, was directed by the division and took place during the second week in May. Preparations for this event consumed an enormous amount of time, beginning in January. Special bulletins were prepared and published and the press was supplied with matter regularly during the publicity period preceding the dates of the occasion and during its progress. Thousands of letters were written to influential people and organizations. Ministers, nurses, health officers, physicians, public school officials and teachers, county supervisors, mayors, secretaries of chambers of commerce, Y. M. C. A.'s and Y. W. C. A.'s were among those whose cooperation was sought and obtained. As a result Health Promotion Week was widely observed in a fitting way by large and small communities alike. Thousands of newspaper clippings brought the information that constructive programs had stimulated popular participation that ended in many of the larger places with community parades and pageants.

BETTER BABY CONFERENCES.

This is a movement significant both because of its popularity and the possibility it offers for extending the promotion of maternity, infant and child hygiene. It has enjoyed a rather remarkable growth during the past fiscal year in Illinois and has been given every possible encouragement.

The division arranged 60 of these conferences at different places where a total of 5,867 children were examined. This compares favorably with the record for the preceding year when 12 were scheduled and less than two thousand examinations made. It is no small achievement to cause immediate and personal contact between high grade public health physicians and the parents of nearly six thousand children within a single year.

The State Fair Conference which is an annual event carried out by the department is worthy of special mention. Over one thousand children were registered and 832 of these appeared for examination.

This was greater by 76 than the number examined in 1920, even though no applicants were received during the progress of the conference as had been previously customary.

All details of the conference other than the actual examinations were planned and carried out by this division. This represents an enormous volume of work for so limited a personnel (the staff of the division consists of three persons). The work consisted of the publicity campaign, the registration of all applicants, the arrangement of programs and schedules and the carrying out of innumerable details that stretched out over a period of three or four months.

SPECIAL ACTIVITIES.

During the year the division devoted a great deal of time to special activities that consisted largely of publicity campaigns. Nearly fifty thousand form letters were prepared and placed in the mails. These were written to physicians, nurses, city officials, business men's organizations, women's clubs, health officers, ministers, school teachers and other groups, and pertained to such things as birth registration, milk pasteurization, Health Promotion Week and semi-public conferences. The high degree of success that has characterized every special undertaking of the department during the year speaks well for the efficiency of the publicity service.

In May and June the Division of Vital Statistics was in the midst of a birth registration campaign that was designed for the purpose of bringing in complete returns against a test by the Federal authorities to determine the eligibility of Illinois for the United States Birth Registration Area. This division cooperated in the undertaking to the extent of issuing 30,312 engraved certificates of birth to the parents of children whose births had occurred and had been reported during 1922. An equal number of birth certificates were indexed and filed.

Let it be said in conclusion that the period covered by this report has been a time of development in the functions of the division and that a greater volume of work will be impossible in the future without an increase in personnel. It is given with a feeling of complete confidence that the work has been constructive at all times, of distinct public service and that it reflects credit alike upon the department and the State of Illinois.

COMPARATIVE SUMMARY FOR THE LAST TWO FISCAL YEARS.

	1920-1921	1921-1922
Literature distributed (number of pieces including "Health News")	332,186	340,004
Posters loaned	1,652	3,001
Films loaned	345	226
*Attendance		60,652
Cuts of cartoons loaned	50	96
Lantern slides (sets) loaned	7	14
Mechanical exhibit demonstrations	6	35
*Attendance		2,152,950
Baby conferences arranged	12	60
*Children examined		5,867
Speaking engagements arranged		47
Books and periodicals loaned from library	859	1,559
Special newspaper stories		153
Birth certificates indexed (1922 series)		30,312
Engraved birth certificates issued (1922 series)		30,312
Names added to "Health News" mailing list		1,291
Letters written	798	3,035
Form letters		49,800

*Accurate record not available for 1920-21.

TABULAR SUMMARY OF ACTIVITIES IN PUBLIC HEALTH INSTRUCTION.

	1921						1922						
	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	April	May	June	Total.
Literature distributed.....	23,500	39,031	31,581	24,952	15,401	16,500	30,511	21,148	21,029	62,587	27,796	25,968	340,004
Posters loaned.....	237	502	197	307	118	135	256	139	281	322	325	182	3,001
Films loaned.....	22	22	6	6	11	35	13	12	24	30	33	12	226
Attendance.....	4,890	21,000	900	4,000	4,120	4,852	1,252	2,235	8,935	8,408	2	2	60,652
Cuts loaned.....	11	14	3	10	40	6	5	1	1	3	2	3	96
Lantern slides (sets) loaned.....	1	2	4	2	2	—	—	—	3	2	6	—	24
Exhibit demonstrations.....	1,000	2,030,000	30,000	42,350	1,560	9,100	4	5	2	3	—	1	36
Attendance.....	5	8	20	2	1	—	—	1	1	2	11	7	60
Bab. conferences arranged.....	952	1,313	1,634	294	—	20	42	—	75	94	623	795	5,967
"Children examined.....	—	—	—	—	—	—	—	—	5	20	16	—	47
Speaking engagements.....	—	—	—	—	—	—	—	—	—	—	—	—	—
Loans from library.....	108	119	107	111	115	154	153	141	227	96	111	117	1,559
Birth certificates.....	13	15	6	6	6	11	6	24	11	19	20	8	153
Special press stories.....	—	—	—	—	—	—	—	—	—	—	14,652	15,660	30,312
Birth certificates indexed.....	—	—	—	—	—	—	—	—	—	—	14,652	15,660	30,312
Engraved 1922 certificates issued.....	—	—	—	—	—	—	—	—	—	—	—	—	—
Letters written.....	259	639	200	114	90	181	213	165	247	375	414	138	3,036
Form letters.....	11,610	1,165	—	—	9,345	102	102	1,325	—	12,438	12,556	1,259	49,800
Names added to "Health News" mailing list.....	191	—	—	422	122	—	161	449	—	—	—	46	1,391

* Number of pieces, including "Health News".

** Reports incomplete.



Figure 1.—For every dot there is a newspaper that uses the weekly press matter issued by the department.

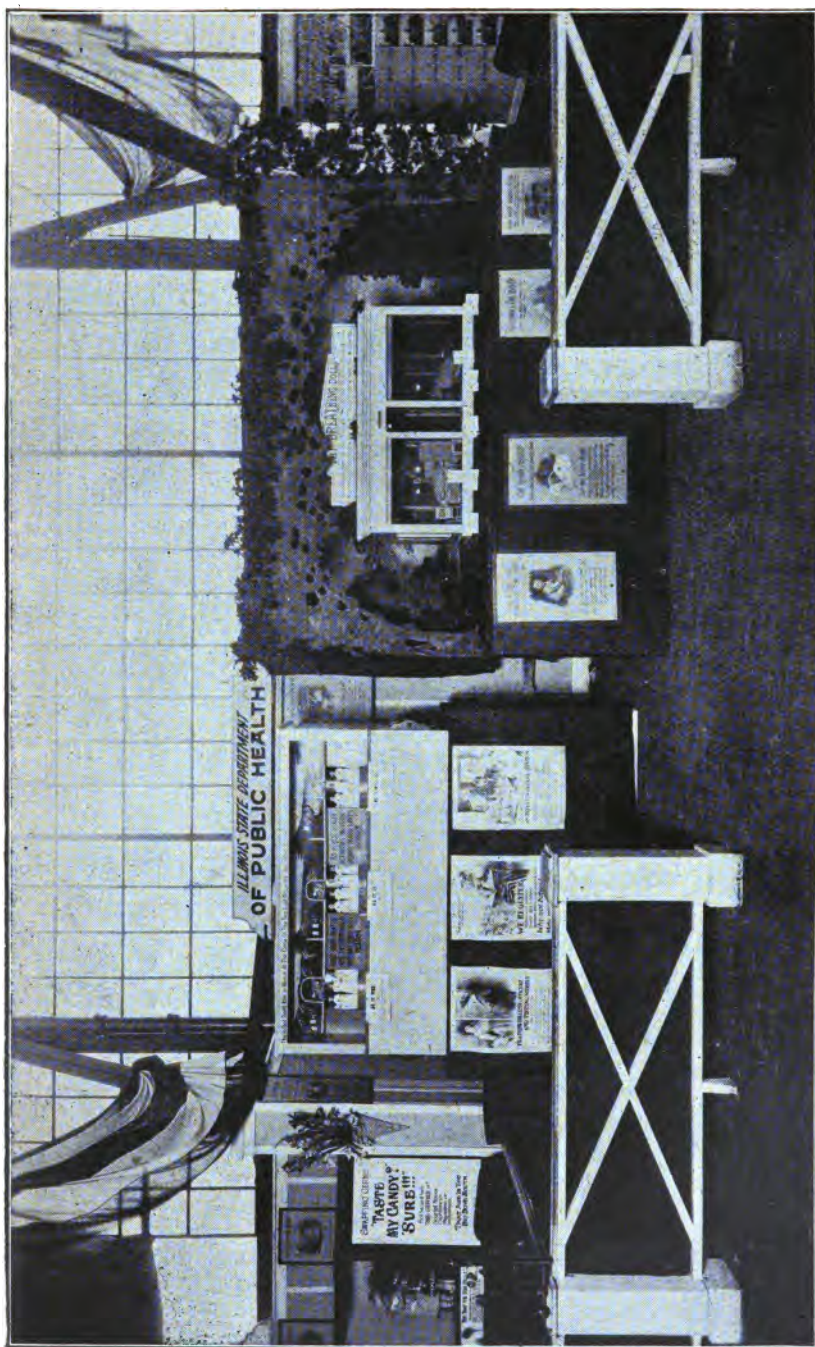


Figure 2—A booth that attracted the interest of literally hundreds of thousands at the first Pageant of Progress in Chicago.

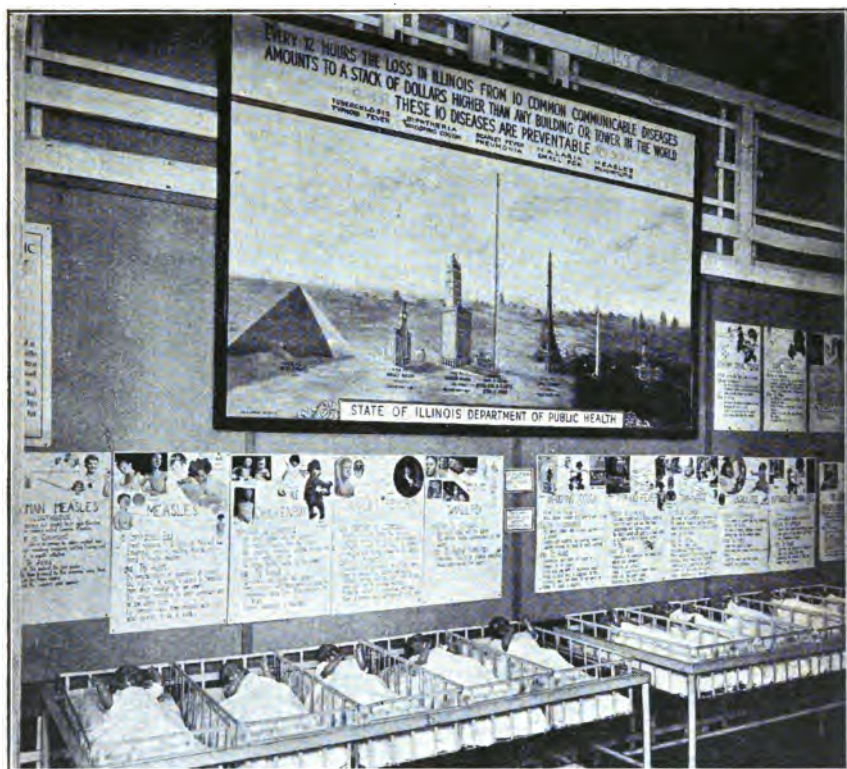


Figure 3.—One of the attractive displays of the department at the State Fair.



Figure 4.—Exhibit methods employed by the department to educate the public in the importance of diagnostic laboratory service.



Figure 5.—Another booth showing exhibit material pertaining to diagnostic laboratory service.

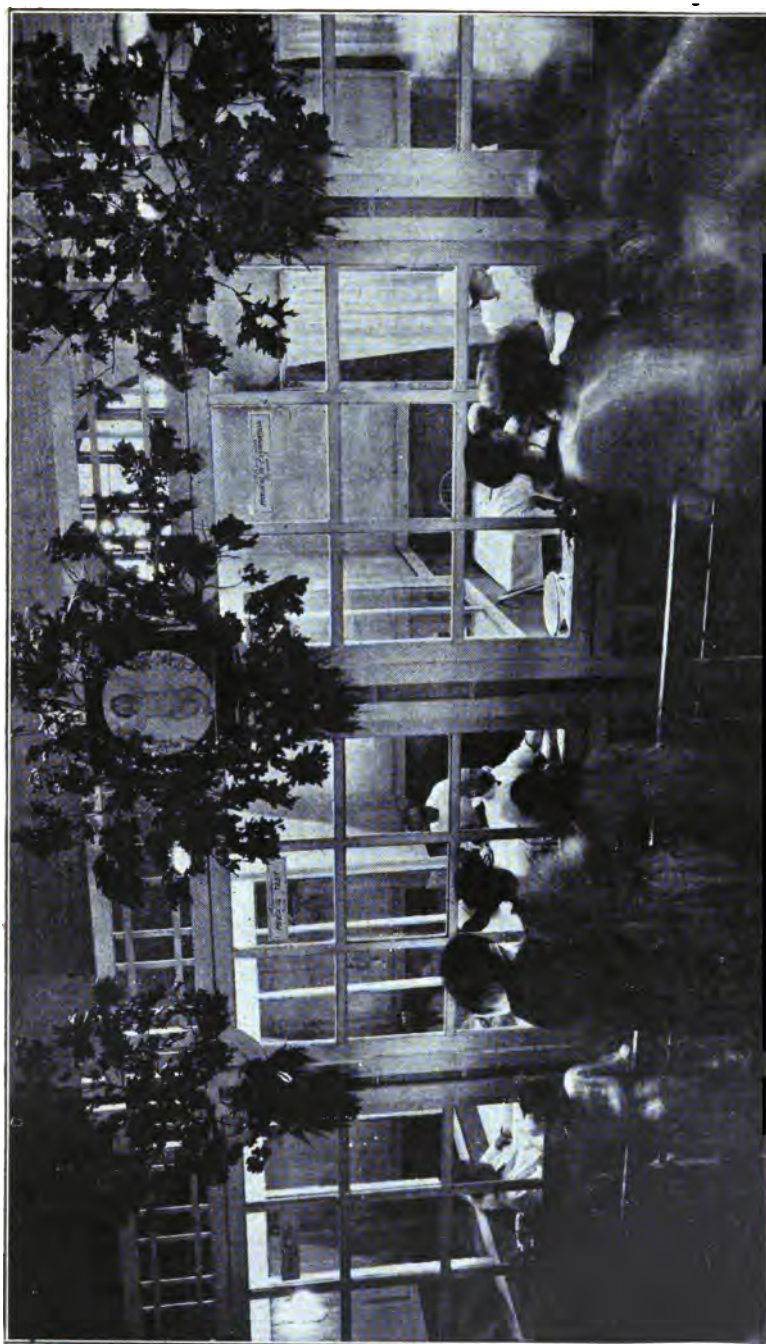


Figure 6.—Examination booths at the State Fair Better Babies Conference headquarters.



Figure 7.—Typical of the crowd that constantly surrounds the State Fair Better Babies Conference headquarters during examinations. Note the glass partitions that separate the booths from the public.



Figure 8.—They won the silver loving cup offered for the most perfect family of six children at the 1922 State Fair Better Babies Conference.



Figure 9.—Parents and children assembled to hear a message on child care and to receive awards at the close of the 1922 State Fair Better Babies Conference.



Figure 10.—Dr. Isaac Rawlings presenting Mary Agnes Zimmerli with the award offered for the most perfect child examined in the 1922 State Fair Better Babies Conference.

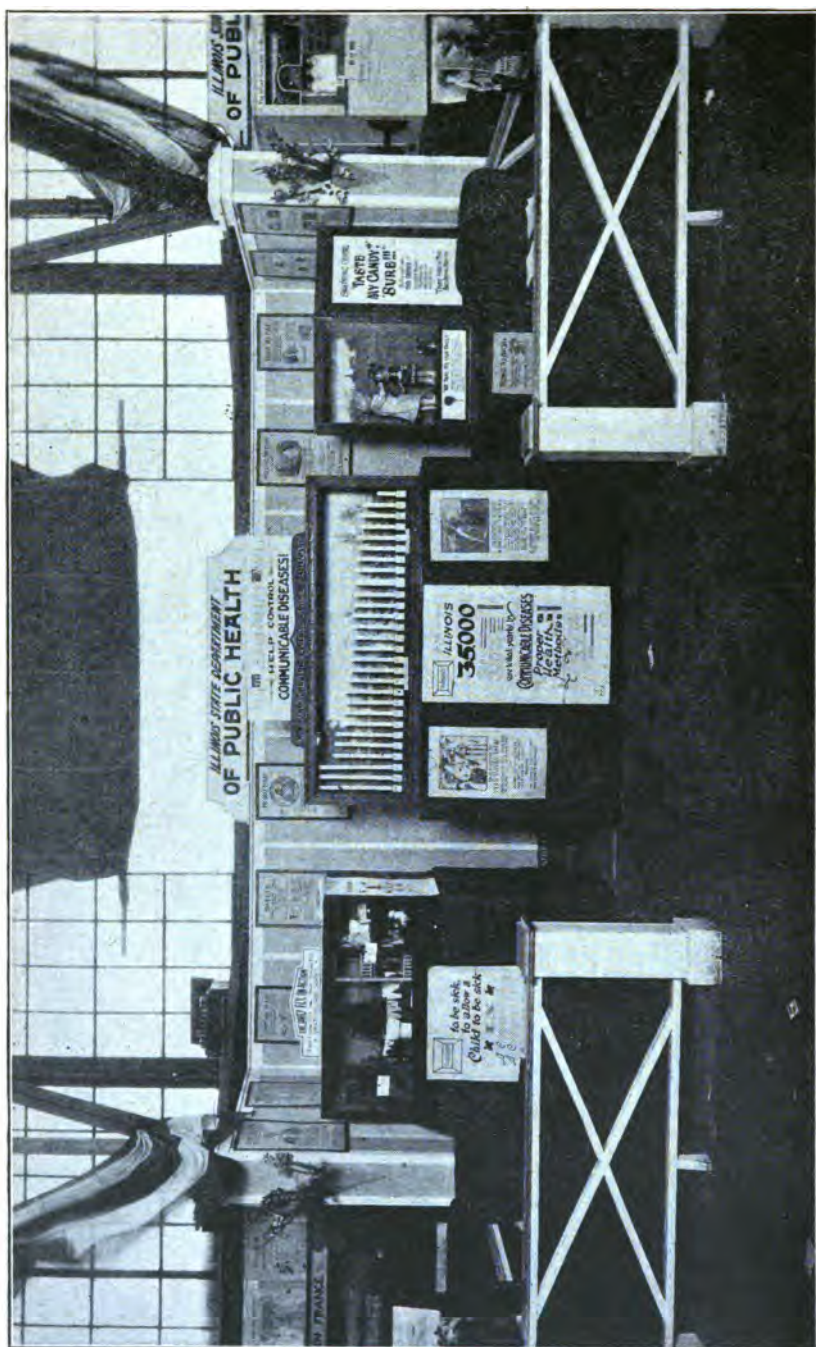


Figure 11.—One of the eight twenty-foot booths occupied by the department at the first Pageant of Progress in Chicago.

DIVISION OF COMMUNICABLE DISEASES.

J. J. McSHANE, M. D., Dr. P. H., *Chief.*

The functions of this division are to supervise the reporting of communicable diseases by local health officers, to aid in controlling such diseases, to help suppress epidemics, to originate plans for preventing epidemics and to stimulate the building up of local health administration. In order to expedite this work four sections or sub-divisions have been created within the division. These are the field service, field correspondence and biological distribution, epidemiological and clerical sections. Each section operates under a chief or supervisor and these are responsible to the division chief.

The field service section consists of a chief and, at the time this report is written, nineteen district health superintendents, two quarantine officers and a stenographer. One of the most important duties of this staff is to aid the local health authorities in limiting the spread of communicable diseases that occur in the different health jurisdictions. Another is to recommend, encourage and promote the establishment of efficient health organizations in all health jurisdictions within the respective districts. A third duty is to advise health and other authorities, the physicians and others of the services which the State Department of Public Health is prepared to render in the interest of the public health and to encourage a more general employment of the available services. It promotes the cause of infant welfare, social hygiene and the registration of births and deaths. It encourages local authorities in getting an adequate and safe water supply, a proper milk supply and medical inspection and nursing services in the schools. The medical members of the staff, when called upon, settle disputed and doubtful diagnoses.

The field correspondence and biological distribution section has to do with the correspondence dealing with the routine work of the office and biological distribution.

The epidemiological section has to do with the investigations of unusual outbreaks and the partial supervision of statistical work in the office.

The clerical section handles all morbidity reports and other office routine. The morbidity reports received daily are tabulated on sheets giving the name of the disease and the number of cases reported from each local health jurisdiction. A weekly and monthly compilation giv-

ing the location and number of cases of the different communicable diseases is made of all daily reports. There is also a card for each of the 2,700 health jurisdictions which gives the total disease incidence in the respective health jurisdiction by months. This card system affords a ready reference to the disease index of the State and its subdivisions. A weekly telegram and a monthly compilation, each showing the total number of diseases reported and the location of important foci are sent to Washington.

A daily tabulated report giving a detailed account of the disease situation in his respective health district is sent to each district health superintendent who makes a special investigation of each reported case of smallpox, typhoid fever and epidemic meningitis.

NEED OF HEALTH SERVICE.

The chief difficulty in the control of communicable diseases is the building up of efficient health administrations so that each local community may take care of its own public health problems. The need for efficient health administration is more evident and necessary than for either police or fire protection and yet some communities do little or nothing toward the prevention of communicable diseases; they do not even establish quarantine in many instances. Many times the State Department of Public Health has no knowledge that cases of communicable diseases are occurring until help is asked by a community.

Another big need is the cooperation of the family with the local health authorities. Instead of trying to conceal the little ones who are ill they should be isolated until such time as a physician can be secured and a diagnosis established. A large number of cases of communicable diseases are not seen by a physician, hence they are not reported. It is therefore the more necessary that local health authorities have the cooperation of all citizens in the control of these diseases and the help of all extra-governmental and volunteer agencies and school authorities. In such diseases as measles and whooping cough the parents can do much in the way of control by keeping the sick and susceptible well children away from each other and away from school.

A great deal must be done not only in teaching the mothers but also in teaching others who have to do with the supervision and care of children. It is important that courses of health instruction be included in the curriculums of our teachers' colleges and institutes and on the programs of our women's clubs and similar organizations so that they may be better able to help us in this great problem of disease prevention. It is very important that all children be taught applicable health lessons in early life so that they may form the proper health habits. If properly trained, the teachers can be of great service in this connection.

HOW NEEDS ARE BEING MET.

The Division of Communicable Diseases has been primarily absorbed in those constructive measures that have as an object the solution of public health problems referred to above. During the last six months of the fiscal year the district health superintendents visited an average of one hundred schools per month and examined over forty thousand children. Efforts have been successfully made to interest the school authorities and teachers in medical inspection of the children. The extent of this work is indicated by the fact that more than sixty-five thousand standard school inspection record cards, developed by the department, were placed in the hands of teachers and others engaged in such work.

As a supplement to school inspection service and in order that it might be carried out more scientifically a specially prepared communicable disease chart was distributed in numbers that ran well into the thousands. This sheet contains brief and concise facts about the character of the more common communicable diseases and the rules governing the quarantine and control of each. It is suitable for permanent reference in the school room.

Another scheme that bore fruit in a gratifying measure was the preparation and distribution of a leaflet and notification card concerning small pox and vaccination. The very wide usage of this method in popularizing vaccination met with a success that is reflected in the difference between 10,921 cases of smallpox reported in the State during the preceding fiscal year and 2,083 cases reported during the year covered by this report. Whole school populations with scarcely an exception were vaccinated either by or under the direction of the district health superintendents and thousands of others were reached through their influence. Nor has the vaccination campaign been confined to the schools alone for the field men have succeeded in stimulating the cooperation of industrial concerns to the extent that in a number of different communities large corporations insisted on the vaccination of all employees.

The field men have talked on public health subjects before teachers' institutes, women's clubs, parent-teachers' associations, farmers' institutes, medical societies, public schools and gatherings of other character. They have participated in campaigns for the organization of existing public health agencies (especially nursing services) into cooperative units, and for the establishment of new agencies of this type. They have been active in the field of vital statistics, having visited hundreds of local registrars in the interest of improving completeness and promptness of returns. Doubtless a great deal of the credit for the increase in completeness of birth registration which took place during the year was due to their efforts.

The field men made personal investigations of all reported cases of typhoid fever, smallpox and epidemic meningitis. This in itself represents an enormous volume of work. Its value is shown in the more complete reporting of these diseases, the noticeable decline in the number of deaths from typhoid, in spite of increased number of cases reported, and the almost phenomenal drop in the smallpox incidence.

It is only in the last six months of the fiscal year that appreciable results from the district health superintendents' activities have been realized. Prior to this period the force of district health superintendents was very small and necessarily their activities were limited to emergency assignments. The broad, constructive health work was postponed due to the imperative necessity of controlling outbreaks of communicable diseases.

With the appointment of a chief district health superintendent and a district health superintendent for practically every senatorial district in the State, a new policy was inaugurated embracing a program of constructive health work whereby not only communicable disease outbreaks were very much reduced in number, but every other phase of public health work was covered. These policies included:

(1) Medical school inspection with special attention to the rural schools and particular emphasis paid to vaccination against smallpox, the elimination of carriers of disease and suspicious cases. Physical examinations of school children were made with a view of stimulating the correcting of physical defects by practicing physicians.

(2) Routine investigations of the following communicable diseases were made: (a) smallpox—the investigation of every case reported and vaccination and quarantine of every known exposure was undoubtedly responsible for the unusual record established. (b) Investigation of every case of adult chickenpox reported. In the past a number of outbreaks of smallpox being due to mistaken diagnosis this factor of investigating adult chickenpox also contributed to the marked reduction in smallpox incidence. (c) Routine typhoid investigations—every case reported was investigated, contacts were advised to be vaccinated and better quarantine measures were established. This policy resulted in the uncovering of many unreported cases and a number of carriers.

(3) Every district health superintendent was instructed to arrange for and address conferences at various points in his respective district for the purpose of (a) disseminating information among the people as to health regulations, (b) spreading the gospel of pasteurized milk, safe water supply, sanitary sewer systems and better general sanitary conditions and (c) the importance of venereal case control. These conferences included talks to medical societies, civic clubs, boards of supervisors and others.

(4) A drive was put on, with the assistance of the Division of Child Hygiene and Public Health Nursing to secure public health nursing services in counties where such services were lacking, with successful results. The counties are Edgar, 1; Berwyn (Cook Co.), 2; Park Ridge (Cook Co.), 1; Grundy, 2; Lake, 1; Madison, 1; McDonough, 1; Monroe, 1; Union, 1.

(5) For the purpose of coordinating the activities of various health agencies in the field, the chief district health superintendent, the supervising nurse of the Division of Child Hygiene and Public Health Nursing and the district health superintendent effected district organizations of health workers throughout the State with the senatorial district as a unit, the public health nurses and other health workers in the district meeting periodically. This plan establishes a continuous contact between the district health superintendent, the local health officer and the public health nurse.

(6) Better Babies Conferences—the district health superintendents in their respective districts conducted, with the assistance of the Division of Child Hygiene and Public Health Nursing, a number of better babies conferences. For the purpose of keeping the field force keyed up to maximum of efficiency, the chief of district health superintendents held frequent regional conferences in the field, the force being divided into three groups, northern, central and southern. At these conferences the policies of the department were brought before the field men and discussed. Various field problems were taken up and matters that needed correcting adjusted.

COOPERATION.

It is a source of much pride that the majority of physicians throughout the State have rendered invaluable and enviable cooperation to the division and the department by reporting promptly cases of communicable diseases as well as the occurrence of births and deaths. Thirty county medical societies adopted resolutions binding the membership to the proposition of complete cooperation with the department in obtaining complete morbidity and vital statistic reports.

STATISTICS.

On the following pages appear tables and graphs which indicate the number of cases of the communicable diseases of major sanitary importance which were reported from the State during the past five fiscal years. Mortality and case rates for the same period are shown. There are also detail tables which show the distribution of incidence and the mortality according to counties and the principal cities. There is a table also which gives some idea of the tremendous economical burden imposed upon the people of Illinois by communicable diseases.

SUMMARY OF ACTIVITIES OF DISTRICT HEALTH SUPERINTENDENTS.

January 1—June 30, 1922.

Doctors.	Places visited.	Emergency assignments.	Schools.		Routine.	Conference.		Addresses.	Epidemic investigations.
			Number visited.	Pupils examined.		General.	Baby.		
F. P. Auld.....	162	30	21	1,430	126	10	1	11	38
R. C. Bradley.....	213	23	4	1,238	155	57	3	3	309
A. B. Capel.....	201	36	8	1,319	157	18	3	1	26
C. W. Cargill.....	86	9	12	1,423	76	1	1	1	54
C. H. Diehl.....	197	28	33	2,216	152	6	1	14	18
C. A. Earle.....	12	4	—	—	5	1	—	2	2
C. C. Ellis.....	184	10	40	4,181	137	30	3	18	13
S. A. Graham.....	135	9	71	3,010	78	1	—	—	16
W. L. Hougland.....	132	14	—	—	83	4	1	1	16
Geo. A. Klein.....	178	18	15	1,685	142	4	—	—	—
C. D. McKinney.....	78	3	6	287	62	10	—	—	11
Ira O. McKinney.....	144	19	17	1,051	104	10	—	3	15
A. J. Markley.....	120	14	20	2,612	66	6	—	3	17
C. S. Nelson.....	141	29	29	1,963	99	3	—	5	11
Henry Reis.....	161	28	63	5,507	70	14	2	3	42
W. H. Smith.....	186	22	28	7,083	133	23	1	6	208
B. F. Steely.....	166	25	24	2,574	116	9	5	3	22
E. M. Thomas.....	90	13	—	—	69	6	2	1	24
Guy F. Turner.....	171	20	78	1,459	91	13	—	2	27
Rodney A. Wright.....	163	13	122	2,155	94	20	4	26	21
Total.....	2,920	367	591	41,193	2,015	246	23	103	890

TYPHOID FEVER.

There were reported for the fiscal year 1921-22, 2,401 cases of typhoid fever with 337 deaths, and for the year previous 1,787 cases with 370 deaths, an increase in the number of cases but a decrease of

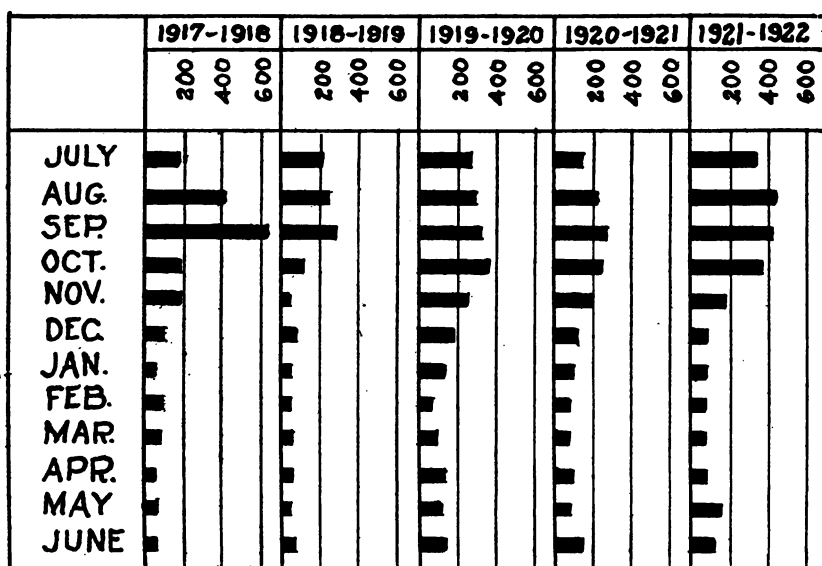


Figure 12.—Number of cases of typhoid fever reported in the State by months and fiscal years.

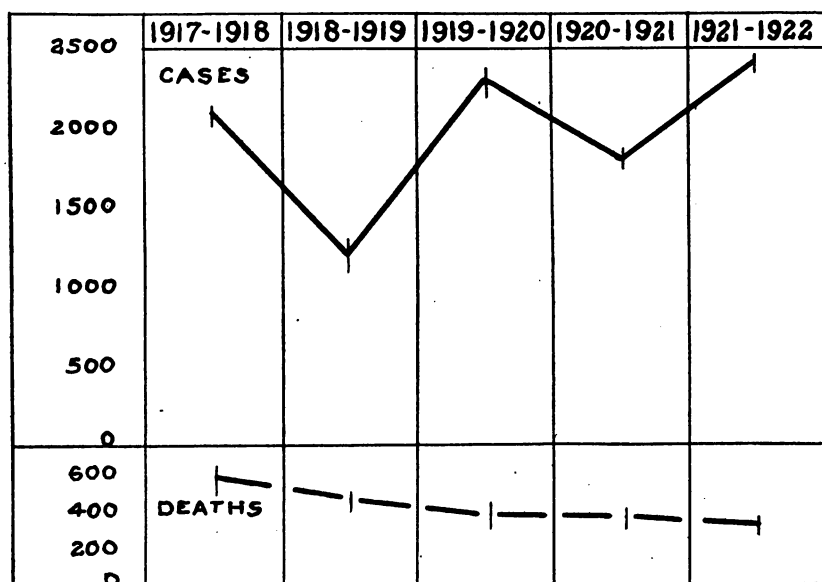


Figure 13.—Number of deaths and number cases from typhoid fever in the State by fiscal years.

33 deaths for this year. One of the best indexes as to the number of cases reported is the number of typhoid deaths which are occurring in any community. Knowing there are approximately nine or ten cases for every death one will note we are short in the number of cases which should have been reported during the past year. The increase in the case rate over the year previous is due to a closer check-up of cases by follow-up letters from this division and the investigation by our district health superintendents of each case reported.

During the past year, a number of small outbreaks of typhoid fever were investigated and as a result a number of new carriers were found. In the case of one community, with a population of 2,500, where typhoid fever has been endemic for years, through the assistance of the local Woman's Civic League, a special census was taken of all persons giving a history of typhoid fever. The examination of combined urine and fecal specimens from some one hundred and sixty individuals believed to have previously had typhoid fever was begun and two carriers were detected among the first thirty from whom specimens were tested. The proper sanitary control of all the carriers who are ultimately detected as a result of this survey, in addition to the proposed improvements in sanitation and the proper release of future cases of typhoid fever on negative culture of urine and feces only, will undoubtedly be the means of relieving this community of a most distressing and preventable annual occurrence of from ten to twenty cases of typhoid fever.

Circumstances and conditions, past and present, found to exist at this endemic typhoid focus are not unlike those known to exist in other localities of Illinois. Further application of the experience gained as a result of this survey is proposed for other communities where a clinical-sanitary survey suggests its practicability. This will, no doubt, result in the detection of considerable numbers of typhoid carriers who constitute sources of typhoid infection in many instances, particularly where sporadic cases of this disease are occurring from time to time.

TYPHOID FEVER, MORBIDITY, MORTALITY AND FATALITY RATES.

Fiscal year.	Population.	Cases.	Deaths.	Morbidity rate (per 100,000).	Mortality rate (per 100,000).	Fatality rate (per cent reported cases).
1917-18.....	6,310,856	1,942	581	30.7	9.2	29.9
1918-19.....	6,398,068	1,229	462	19.2	7.1	37.5
1919-20.....	6,485,280	2,293	386	35.3	5.9	16.8
1920-21.....	6,572,492	1,787	370	27.1	5.6	20.7
1921-22.....	6,659,704	2,401	337	36.	5.	14.

MALARIA.

During the fiscal year 1921-1922, there were reported 1,025 cases of malaria with 69 deaths as compared with 1,365 cases with 76 deaths for the previous year. Most of the cases and deaths occurred in southern Illinois.

At the present time the Department of Public Health, with the cooperation of the International Health Board and the Illinois Central Railway Company, is making a malaria survey and a demonstration in malaria control at Carbondale. During the coming year a number of places in southern Illinois where malaria is endemic will be surveyed and measures for the prevention and control will be inaugurated.

SMALLPOX.

In spite of the fact that a most virulent variety of smallpox, causing many deaths, was introduced into several Illinois communities from a malignant epidemic in Kansas City, Missouri, and in spite of the most threatening smallpox situation seen in the State for years, the prompt action of the division in issuing general warnings and in promoting vaccination campaigns throughout the State caused Illinois to escape entirely a serious epidemic and to experience a freedom from smallpox unknown in recent years. Indeed there were nearly 9,000 fewer cases reported than for the preceding fiscal year, and in spite of the fact that many of the deaths that occurred from this disease during the year were traced directly to the malignant outbreak in Kansas City, there were 3 less than for the preceding year.

Without doubt the gratifying decline in the smallpox incidence was due in large measure to the prompt and efficient investigation by district health superintendents of all cases reported. These investigations resulted always in the prompt application of quarantine regulations and the vaccination of at least the known contacts. In many instances these led to wholesale vaccination in the communities concerned. The district health superintendents have constantly striven to promote vaccination even where no smallpox was present. The effect of these measures, which may be visualized in the table and graphs below, speak for themselves.

SMALLPOX. MORBIDITY, MORTALITY AND FATALITY RATES.

Fiscal year.	Population.	Cases.	Deaths.	Morbidity rate (per 100,000).	Mortality rate (per 100,000).	Fatality rate (per cent reported cases).
1917-18	6,310,856	6,278	15	99.4	0.2	0.2
1918-19	6,398,068	2,505	9	39.1	0.1	0.3
1919-20	6,485,280	7,802	8	120.3	0.1	0.1
1920-21	6,572,492	10,928	29	166.2	0.4	0.9
1921-22	6,659,704	2,083	26	31.2	0.3	1.2

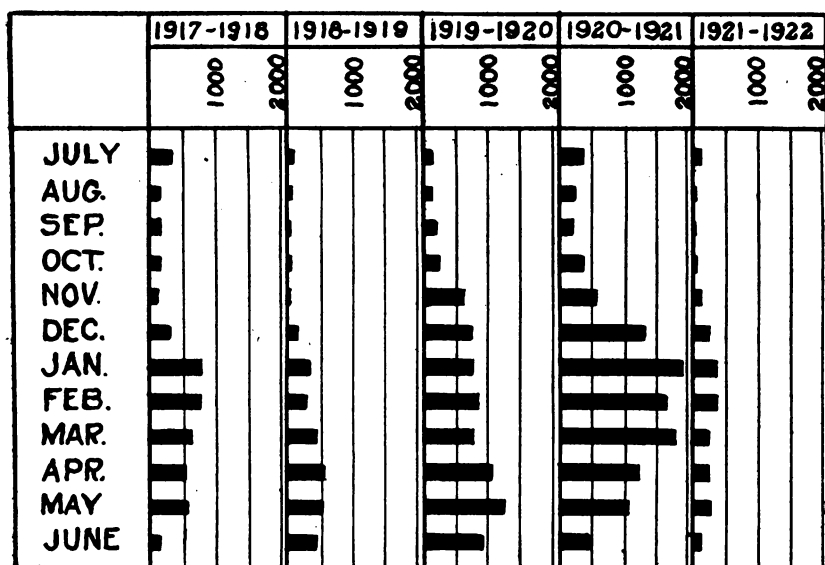


Figure 14.—Number of cases of smallpox reported in the State by months and fiscal years.

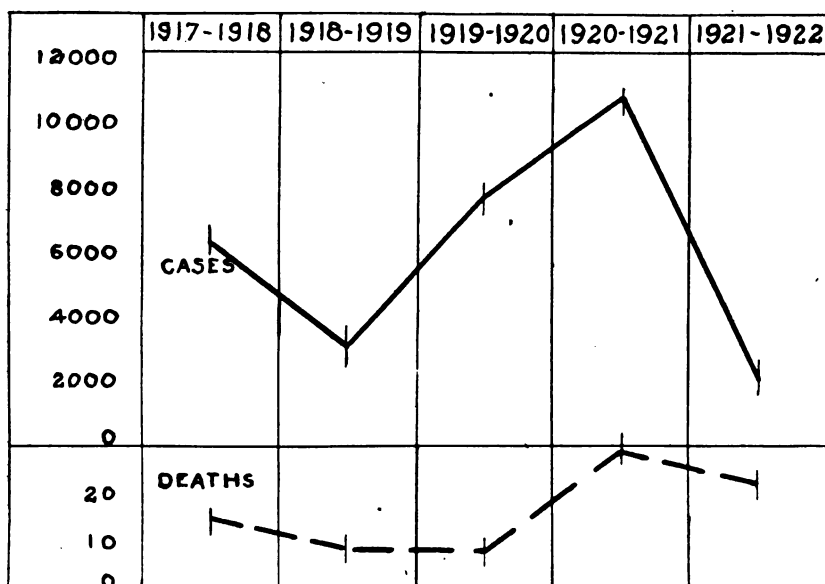


Figure 15.—Number of deaths and number of cases from smallpox in the State by fiscal years.

MEASLES.

It is indeed gratifying to note the decrease in morbidity and mortality from measles for the last fiscal year. There were reported

14,862 cases with 142 deaths as against 33,676 cases with 353 deaths for the year previous. The seasonal variation and distribution of incidence and mortality may be observed from the tables.

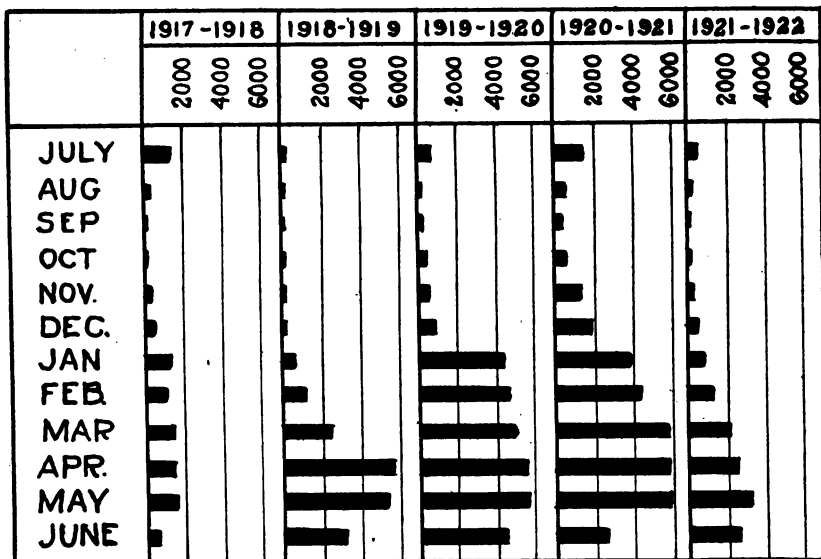


Figure 16.—Number of cases of measles reported in the State by months and fiscal years.

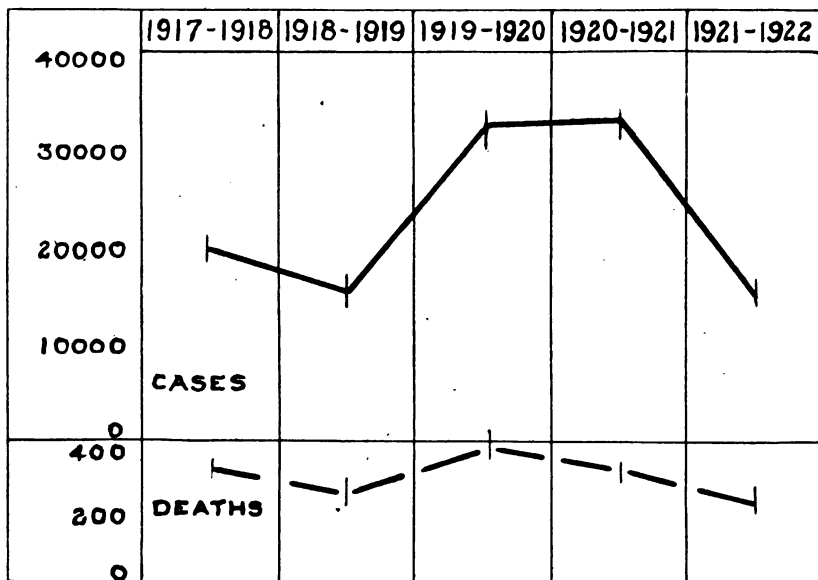


Figure 17.—Number of deaths and number of cases from measles in the State by fiscal years.

MEASLES, MORBIDITY, MORTALITY AND FATALITY RATES.

Fiscal year.	Population.	Cases.	Deaths.	Morbidity rate (per 100,000).	Mortality rate (per 100,000.)	Fatality rate (per cent reported cases).
1917-18	6,310,856	20,498	352	324.8	5.5	1.7
1918-19	6,398,088	15,804	276	247.	4.4	1.7
1919-20	6,485,280	33,555	429	517.1	6.6	1.2
1920-21	6,572,492	33,676	353	512.3	5.5	1.
1921-22	6,650,704	14,862	142	223.1	2.1	0.9

SCARLET FEVER.

Decidedly favorable declines marked both the incidence and mortality from scarlet fever during the fiscal year when 13,947 cases and 261 deaths were reported as compared with 19,765 cases and 361 deaths for the preceding year. This very gratifying decrease is believed to be due to a revision and better enforcement of the rules which now require more complete quarantine and better supervision of patients and suspected cases so that unreported cases and those not fully recovered were prevented from attending school during the period of danger.

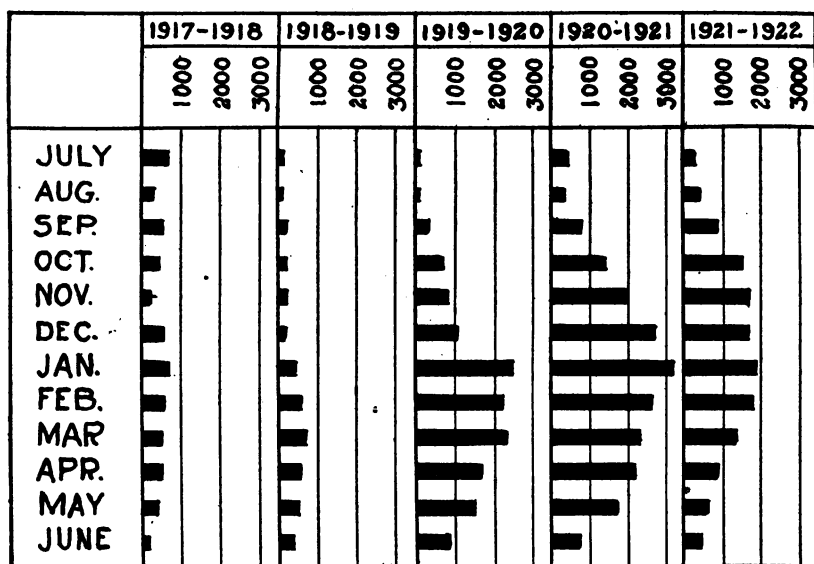


Figure 18.—Number of cases of scarlet fever in the State by months and fiscal years.

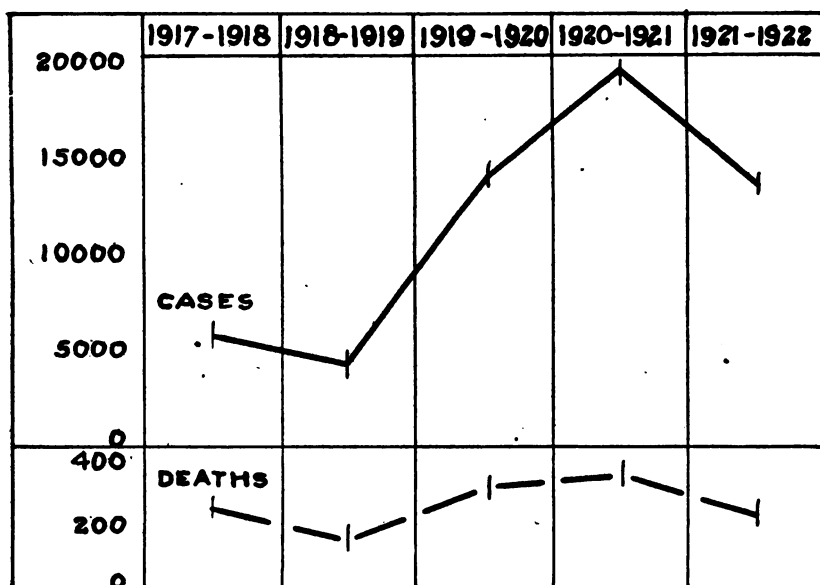


Figure 19.—Number of deaths and number of cases from scarlet fever in the State by fiscal years.

SCARLET FEVER. MORBIDITY, MORTALITY AND FATALITY RATES.

Fiscal year.	Population.	Cases.	Deaths.	Morbidity rate (per 100,000).	Mortality rate (per 100,000).	Fatality rate (per cent reported cases).
1917-18.....	6,310,856	7,584	259	120.1	4.1	3.4
1918-19.....	6,398,068	3,634	182	56.7	2.8	5.0
1919-20.....	6,485,280	16,810	324	259.2	4.9	1.9
1920-21.....	6,572,492	19,765	361	300.7	5.5	1.8
1921-22.....	6,659,704	13,947	261	209.4	3.9	1.8

WHOOPIING COUGH.

Whooping cough, one of the diseases which claims so many infants under two years of age, is not given the attention it should have by the local health authorities. If we could only postpone whooping cough until after a child has reached five or six years of age we could do a great deal in reducing the high mortality rate. Since there is no way of arriving at a diagnosis of whooping cough during its most infectious stage, which is before the child begins to whoop, when whooping cough is prevalent in a community all children who have coughs and colds should be isolated until a diagnosis can be established. All children who have been exposed to or have been in contact with whooping cough cases should be given pertussis vaccine, some authorities claiming remarkable results from its use.

During the fiscal year ending June 30, 1922, there were reported to this department 8,336 cases with 264 deaths as compared with 16,165 cases and 549 deaths for the previous fiscal year, a decrease of 7,829 cases and 285 deaths for this year.

The distribution of incidence and morbidity may be found in the detailed table at the end of this report.

The marked reduction in deaths is noteworthy as the death rate is the lowest ever recorded for this disease. The average number of deaths annually for the preceding four years was 531.

DIPHTHERIA.

During August, 1921, there was noted a weekly increase in diphtheria cases and, as expected, the morbidity doubled in September and more than doubled in October. There seemed to be an unusual prevalence of diphtheria throughout the United States during the fall months of 1921.

For the fiscal year 19,901 cases and 1,258 deaths were reported and, for the year 1920-1921, there were reported 16,764 cases and 1,243 deaths.

Public health authorities realize that if there is to be a further reduction in morbidity and mortality the public must be educated to the use of the Schick test and the administration of toxin-antitoxin which confers an immunity for a considerable period of time. This must be done early in child life, the earlier after six months of age the better. All children of pre-school age should be given toxin-antitoxin for the reason of the high mortality rate in this age group. Children of school age should be Schick tested and those showing positive reaction should be given toxin-antitoxin. If all the children under fifteen years of age were properly immunized by toxin-antitoxin and future children immunized when two years old, we could wipe diphtheria out of this State in a very few years.

The division has been doing a great deal to popularize the use of the Schick test and toxin-antitoxin. A number of articles have been published both in the Health News and in the newspapers, and follow-up letters have been sent to local authorities and doctors regarding the value of this procedure.

One of the very encouraging outcomes of this campaign is the fact that the case fatality rate for the past fiscal year was 6.3 as compared with 7.4 for the year before, and very much higher rates for the three preceding years. The decline in percentage of deaths, while the incidence is greater, proves that the gospel of early treatment that is preached by the department and especially by district health superintendents is falling on fertile soil. The prevention of diphtheria will naturally follow once the public is thoroughly awake to what antitoxin will do.

The morbidity and mortality table deserves thoughtful attention. The mortality figures are especially significant in view of the free distribution of antitoxin.

DIPHTHERIA. MORBIDITY, MORTALITY AND FATALITY RATES.

Fiscal year.	Population.	Cases.	Deaths.	Morbidity rate (per 100,000).	Mortality rate (per 100,000).	Fatality rates (per cent reported cases).
1917-18	6,310,856	11,000	1,527	174.3	24.1	13.8
1918-19	6,398,068	8,060	979	125.9	15.3	12.1
1919-20	6,485,280	12,876	1,061	198.5	16.3	8.2
1920-21	6,572,492	16,764	1,243	255.1	18.8	7.4
1921-22	6,659,704	18,901	1,258	288.9	19.2	6.3

DIPHTHERIA CARRIERS (FISCAL YEAR 1921-1922).

1921	Down State.	Chicago.	1922	Down State.	Chicago.
July	179	179	January	270	268
August	174	168	February	239	207
September	292	239	March	235	232
October	480	408	April	165	154
November	516	401	May	139	128
December	420	378	June	214	206
Total	2,061	1,833	.....	1,262	1,195

Total—Down State, 3,323.

Total—Chicago, 3,028.

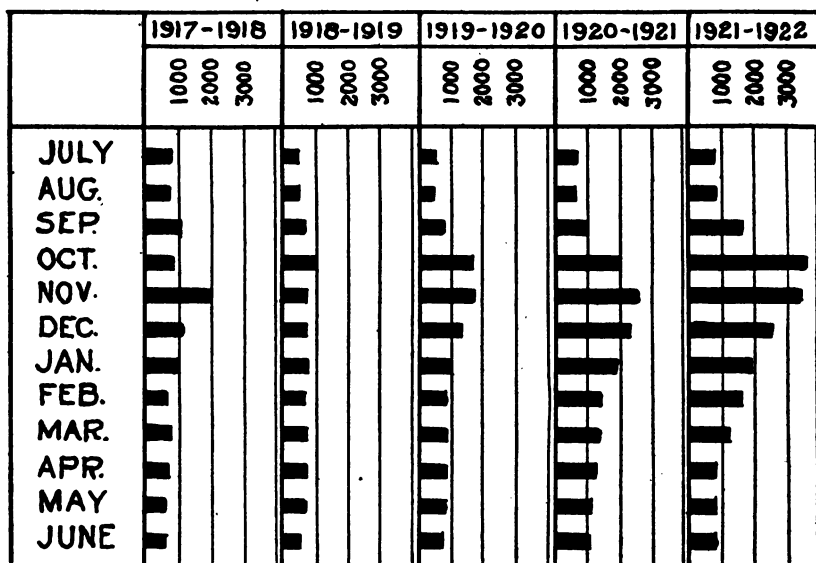


Figure 20.—Number of cases of diphtheria in the State by months and fiscal years.

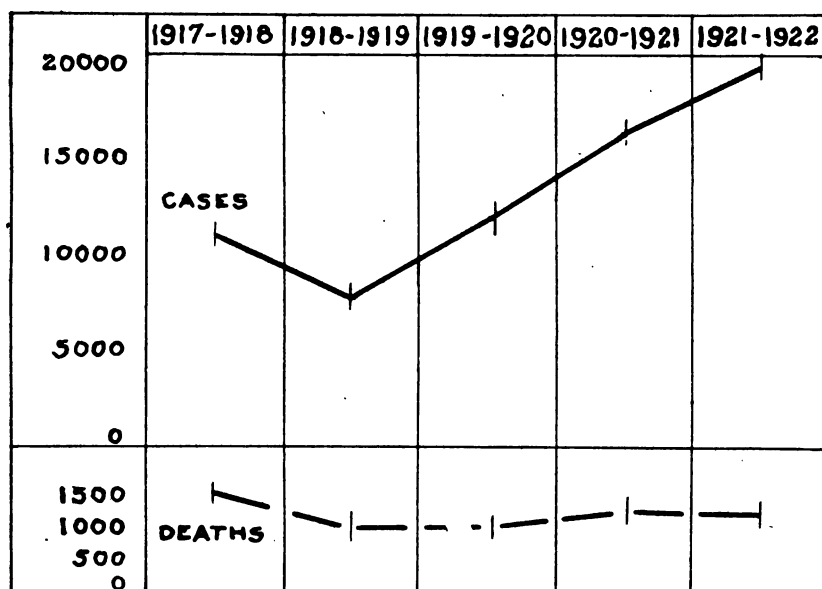


Figure 21.—Number of cases and number of deaths from diphtheria in the State by fiscal years.

POLIOMYELITIS.

There was a decided increase in the number of cases of acute anterior poliomyelitis during the fiscal year 1921-1922. There were 653 cases and 145 deaths during the past year, compared with 303 cases and 66 deaths for the previous year. Of the 653 cases reported during 1921-1922, 625 of them were reported during the first six months.

POLIOMYELITIS. MORBIDITY, MORTALITY AND FATALITY RATES.

Fiscal year.	Population.	Cases.	Deaths.	Morbidity rate (per 100,000).	Mortality rate (per 100,000).	Fatality rate (per cent reported cases).
1917-18.....	6,310,856	881	344	13.9	5.4	39.0
1918-19.....	6,398,068	256	121	4.0	1.8	47.2
1919-20.....	6,485,280	364	101	5.6	1.5	27.7
1920-21.....	6,572,492	303	66	4.6	1.0	21.7
1921-22.....	6,659,704	653	145	9.8	2.1	22.2

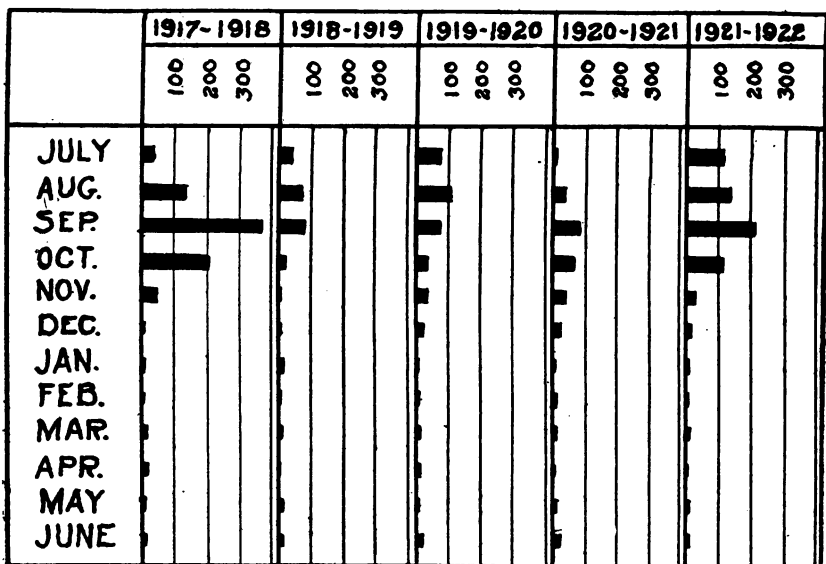


Figure 22.—Number of cases of poliomyelitis reported in the State by months and fiscal years.

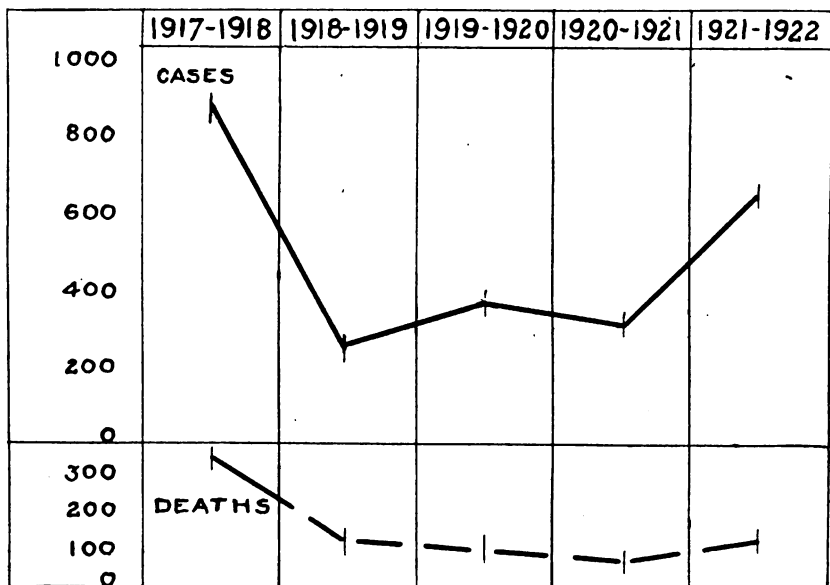


Figure 23.—Number of deaths and number of cases from poliomyelitis in the State by fiscal years.

EPIDEMIC MENINGITIS.

During the fiscal year ending June 30, 1922, there were reported 236 cases of epidemic meningitis and 62 deaths as against 193 cases and 63 deaths for 1920-1921, an increase of 33 cases, but a decrease of one death. In 1919-1920 there were reported 302 cases with 95 deaths; for 1918-1919, 162 cases with 93 deaths and for 1917-1918, 568 cases with 240 deaths. From the above figures it will be noted that the smallest number of deaths for any of the past five years occurred during the past fiscal year.

RABIES.

There were reported ten cases with one death from rabies for the past year against nine cases with two deaths for 1920-1921, and fourteen cases with three deaths for 1919-1920.

There is no reason why we should have one death from rabies when this disease is so easily controlled. Most of the cases of rabies in animals occur among dogs. When a dog becomes rabid he fights or attacks all animals he meets in his travels, biting and infecting the animals attacked. Until recently the one method of control was by muzzling and quarantining animals in neighborhoods through which rabid dogs had passed. We now have a method of vaccination which will immunize dogs against rabies. In Connecticut some one thousand five hundred and fifty-two dogs were vaccinated against rabies and since this was done six dogs of the group that were vaccinated were bitten by rabid dogs and none developed rabies. In another instance, a number of dogs were bitten and the unvaccinated dogs developed rabies, but the vaccinated dogs did not. Inoculation with anti-rabic vaccine confers immunity for about two years.

TUBERCULOSIS.

Some interesting comparisons can be drawn from the following figures. For the past fiscal year there were reported 15,494 cases of tuberculosis with 4,662 deaths and for the year previous or 1920-1921, 13,265 cases with 5,594 deaths, an increase of 2,229 cases in the morbidity reports and a decrease in mortality of 932 deaths. This does not mean that more cases of tuberculosis occurred in Illinois during the past year, but it means that there is better reporting of this disease due to the close follow-up work by the division and the cooperation with extra-governmental agencies in getting reports.

Figures showing incidence and mortality from tuberculosis are included in the tables for pneumonia so that comparison is easy.

PNEUMONIA.

Pneumonia is a close second to tuberculosis in the cause of death. During the last year there was a decided decrease in the number of

deaths over the year previous. There were 13,032 cases reported for the fiscal year with 4,103 deaths, as compared with 8,976 cases and 4,948 deaths for the year 1920-1921, an increase of 4,056 cases, but a reduction of 845 deaths. This increase in the number of morbidity reports may be due to the follow-up work of this division, especially the following up of death reports received from the Division of Vital Statistics.

The following tables give a comparison of the morbidity and mortality of pneumonia and tuberculosis.

CASES OF TUBERCULOSIS AND PNEUMONIA REPORTED (FISCAL YEARS).

	1917-1918	1918-1919	1919-1920	1920-1921	1921-1922
Tuberculosis.....	13,417	16,195	18,286	13,265	15,494
Pneumonia.....	6,297	22,718	18,268	8,976	13,032

TUBERCULOSIS AND PNEUMONIA DEATHS.

	1917-1918	1918-1919	1919-1920	1920-1921	1921-1922
Tuberculosis.....	8,402	7,820	6,741	5,594	4,662
Pneumonia.....	8,277	13,626	8,078	4,948	4,103

PELLAGRA.

During the fiscal year 1921-1922, there were twenty-four cases of pellagra reported. Six of these cases were reported from Cook County, two from Crawford, four from Franklin, one from Kankakee, one from LaSalle, three from Morgan, two from Peoria, one from Pulaski, one from Rock Island, one from Whiteside and two from Williamson.

LEPROSY.

Two cases of leprosy were reported during the year, one from Rockford and the other from Chicago. Both cases were in men. The one in Rockford was a man 39 years of age, a native of Sweden and had lived in the United States 23 years. The other case was in a negro 27 years of age, who was born in Florida and had lived in Chicago about one and one-half years.

EPIDEMIC JAUNDICE.

In the early part of the year 1922 four cases of epidemic jaundice were reported by a physician at East Lynn, Vermilion County. Three of these cases were in one family and the other in a child related to this family. Specimens of urine were submitted to the laboratory at Champaign by one of our district health superintendents. The *Spirochaete icterochemorrhagiae* was found in one of the specimens. No doubt other cases have occurred in the State which were not recognized.

ANTHRAX.

During the past fiscal year there were reported three cases of anthrax, two from Madison County and one from Iroquois. Circumstances surrounding both cases were carefully investigated by district health superintendents, but no data of epidemiological value could be obtained.

TRACHOMA.

There were reported during the year from the different communities throughout the State 345 cases of trachoma, 27 of which were reported from Chicago and 318 from down-state.

Two trachoma surveys were made during the year. The first one was made by Dr. R. W. Raynor, of the United States Public Health Service, with the assistance of Doctors Capel, Smith and Steely, district health superintendents. In Benton, 1,536 children were examined and one case of active trachoma found. Two active cases in adults were seen. At West City, about five hundred children were examined and no trachoma found. At Marion, 400 and at West Frankfort, 2,036 children were examined and no trachoma found at either place.

The second survey was made by Dr. A. B. Troupa of Chicago. He examined a large number of children in a number of cities and villages in southern Illinois and reported a number of cases.

During the coming fall a third survey by United States Public Health Service experts will be made. In the meantime all efforts toward controlling and preventing the spread of the disease are encouraged.

OCCUPATIONAL DISEASES.

As required by the Occupational Disease Act reports of examinations were made by 418 manufacturers of which 355 were in Chicago and 63 down-state. It was noted on the monthly reports that 73 persons were reported as suffering from lead poisoning, one from naphtha poisoning and one from anaemia. A survey will be made during the coming year to learn, if possible, if there are any other employers or manufacturers who are not having periodical examinations made as required by the Occupational Disease Act. Any information of failure to comply with the law that may be found will be furnished to the Department of Labor as a basis for prosecution.

Under the model State law for the morbidity reports it is noted that under "Group 2—Occupational Diseases and Injuries," there are some occupational diseases listed which under the Occupational Disease Act are not required to be reported. It is hoped that during the coming year some provision can be made, possibly by amending the present Occupational Disease Act, so that these diseases can be included together with any other disease or disability contracted as a result of the nature of employment. A great deal of progress has been made in pre-

venting certain occupational diseases but there is still a great deal to be done along these lines.

DISTRIBUTION OF PREVENTIVE AND CURATIVE AGENCIES.

During the last year there was a very large demand for antitoxin. This demand began with the opening of the schools in September and assumed enormous proportions in October, and continued well into November and December. Owing to the lateness at which the contract for furnishing the department with antitoxin was let, the new contractors were not at first prepared to deliver antitoxin in the amounts required.

As a result of this situation and because the demand for antitoxin was unusually heavy during the fall, considerable difficulty was experienced in furnishing certain communities with an adequate supply of this serum as promptly as was desirable. In October our agents requested three times as many packages as were distributed during the same month in 1920.

During the first six months of the fiscal year 56,286 packages of antitoxin were furnished the agents of the department at a cost of \$38,462.15. Indeed the cost almost exhausted the entire appropriation for the purchase of sera for the fiscal year. For the entire year 75,814 packages were distributed, more than twice as many packages being distributed during the first six months as during the last. The following quantities of diphtheria antitoxin were distributed during the year:

29,844	1,000	unit packages, chiefly for preventive use.
20,504	5,000	unit packages, for individual curative use.
21,863	10,000	unit packages, for individual curative use.
1,886	10,000	unit packages, for institutional use.
1,717	20,000	unit packages, for institutional use.

75,814 packages or 404,194,000 units.

This represents 15,405 packages consisting of 92,110,000 units more than were distributed the preceding year.

The total cost of the 75,814 packages of antitoxin distributed was \$54,959.90. At the retail market price this same amount would have cost the citizens of the State \$337,131.00.

While the demand for typhoid vaccine was not unusual, approximately six thousand six hundred forty-nine packages were distributed by our agencies, the same costing approximately two thousand, six hundred thirty-five dollars.

Approximately four thousand packages of silver nitrate were distributed, the cost being approximately five hundred dollars. The department is now furnishing this prophylactic directly to hospitals having maternity wards instead of indirectly through agents.

It was decided at the beginning of the fiscal year to distribute both Schick test material and toxin-antitoxin free to all doctors who made application therefor. It is not as yet distributed through the

agencies due to the fact that many of them are not equipped to keep this material at the necessary low temperature. It is, however, distributed to all physicians who apply. It is to be regretted that physicians generally have not yet availed themselves of the opportunity of utilizing these valuable gratuitous agencies for ascertaining susceptibility to and immunizing against diphtheria.

In checking over the records of the division it is indeed gratifying to compare the diphtheria mortality rate with the case or morbidity rate. For years before the introduction of antitoxin the mortality was very high but with the introduction of this serum it dropped very noticeably.

Since 1917-1918 the number of diphtheria deaths has fallen from 13.7 per 100 cases reported to 6.3. In other words the free distribution of antitoxin and the educational work of the department have made it possible for seven more children out of each hundred who contract diphtheria to live than was the case four years ago. This means that 1,469 children are alive today who would have been dead had the 1917-1918 diphtheria case mortality rate prevailed in 1921-1922.

TYPHOID FEVER: REPORTED MORBIDITY AND MORTALITY.

Fiscal year totals for State, counties and principal cities.	1917-1918		1918-1919		1919-1920		1920-1921		1921-1922	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
The State	1,942	581	1,229	462	2,293	386	1,787	370	2,401	337
Adams County	41	14	15	8	27	5	18	5	16	3
Quincy							17	2	12	3
Alexander County	7	11	1	7	5	8	9	9	11	5
Cairo							2	6	7	3
Bond County	8	2	2	2	1	2	16	3	31	1
Boone County							1	1	4	1
Brown County		2	1		3			1	4	
Bureau County	18	5		2	4		10	1	36	2
Calhoun County	2	4			1	2		1	2	
Carroll County	15	1		2			4		10	1
Cass County	1	1	2		9	4	2	1	3	
Champaign County	16	3	7	5	34	3	7	1	53	6
Champaign							5		5	2
Urbana							1	1	17	
Christian County	6	2	2	2	26	2	10	2	14	1
Clark County	24	1	2	1	14	4	10	1	31	4
Clay County	13		7	4	13		27	1	29	
Clinton County	18	2	1	10	17	1	4	1	31	2
Coles County	45	3	9	3	67	10	48	4	32	3
Mattoon							24	3	12	1
Cook County	306	57	286	35	358	38	303	30	270	39
Berwyn							1		1	
Blue Island									2	
Chicago							258	26	233	35
Chicago Heights							2	1		
Cicero							3		5	
Evanston							4	2	2	
Forest Park							1		2	
Maywood							1			
Oak Park							1		4	1
Crawford County	20	4	2		10	1	11	2	20	5
Cumberland County	4	2	9		7		4	1	6	1
DeKalb County	5	3	3		2	1	5	1	10	
DeWitt County	2	1	2	2	5		4	3	7	

TYPHOID FEVER—Continued.

Fiscal year totals for State, counties and principal cities.	1917-1918		1918-1919		1919-1920		1920-1921		1921-1922	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Douglas County	8	1	1	1	20	3	57	5	25	1
DuPage County	1	1	21	5	5	1	11	9	9	1
Edgar County	8	2	1	1	5	5	12	1	12	1
Edwards County	8	2	2	3	9	1	3	1	11	2
Effingham County	11	4	10	4	28	2	12	2	23	6
Fayette County	8	6	7	15	35	9	6	5	59	6
Ford County	24	1	1	1	2	1	7	2	2	1
Franklin County	48	11	11	20	105	16	59	12	106	22
Fulton County	7	6	1	1	9	3	4	1	10	1
Canton									5	1
Gallatin County	4	2	6	6	14	4	13	3	12	1
Greene County	1	1	2	2	19	3	3	3	6	1
Grundy County	3	1	1	2	2	1	4	1	8	1
Hamilton County	3	2	1	7	20	4	21	5	29	7
Hancock County	8	3	7	1	12	2	32	2	18	3
Hardin County	12	5	2	3	2	3	2	4	2	2
Henderson County	1	1	2	1	1	1	1	1	3	1
Henry County	9	5	1	5	41	11	34	5	74	6
Kewanee							13	1	64	6
Iroquois County	9	4	1	1	18	2	19	2	18	2
Jackson County	13	10	12	13	19	12	21	9	28	6
Murphysboro							3	3	6	2
Jasper County	8	3	5	1	20	3	5	2	16	3
Jefferson County	10	10	9	9	33	6	16	12	33	9
Jersey County	18	2	4	1	10	3	12	3	6	1
Jo Daviess County	3	2	6	2	6	2	2	2	6	1
Johnson County	5	3	3	3	23	5	3	3	24	1
Kane County	16	8	4	4	56	3	18	6	76	12
Aurora							8	5	27	6
Elgin							4	4	6	1
Kankakee County	29	5	14	5	18	5	13	2	20	5
Kankakee							9	2	5	1
Kendall County					3		10			
Knox County	46	9	30	4	58	5	27	4	21	1
Galesburg							18	3	17	1
Lake County	66	18	36	8	79	19	67	11	19	2
Waukegan							24	2	9	
LaSalle County	23	7	9	5	31	4	26	4	3	1
LaSalle							6	3	2	
Ottawa									2	
Streator							9	1	4	
Lawrence County	31	1	1	1	18	9	24	4	16	3
Lee County		1	1	1	1		6		8	3
Livingston County	24	7	3	6	6	1	6	1	18	3
Logan County	7	2	1	5	2	1	1	1	6	1
Lincoln							1		3	
Macon County	100	12	5	6	31	3	25	6	51	7
Decatur							23	6	28	6
Macoupin County	29	6	5	1	10		15	4	17	1
Madison County	38	15	36	19	52	9	13	8	30	3
Alton							9	3	7	2
Granite City							3	3	3	
Marion County	14	9	13	9	32	4	38	5	40	7
Centra							7		2	1
Marshall County			7	1	3	1	22	2	3	1
Mason County	4		4	2	12	4	1	2	8	1
Massac County	5	11	5	11	6	1	4	3	6	1
McDonough County	17	4	1	2	12	1	20	1	3	2
McHenry County	30	4	1	1	5		4		20	1
McLean County	12	6	2	5	25	13	18	5	28	1
Bloomington							9	4	14	1
Menard County	4	1	8	2	3		3			
Mercer County	5	1	4	3	20		8	1	5	2
Monroe County	7	5	11	5	5	1	17	3	14	2
Montgomery County	8	10	2	7	18	1	21	4	22	5
Morgan County	79	9	71	10	60	4	17	1	28	1
Jacksonville							9	1	18	1
Moultrie County	3	2			1		5		8	4
Ogle County	4		1		7		6		24	2
Peoria County	9	11	3	8	18	5	14	7	8	3
Peoria							9	6	5	1
Perry County	8	8	8	2	19	2	22	6	14	1

TYPHOID FEVER—Concluded.

Fiscal year totals for State, counties and principal cities.	1917-1918		1918-1919		1919-1920		1920-1921		1921-1922	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Piatt County	8	1			1	1	1		16	1
Pike County	13	7	1	2	18	2	8	1	4	
Pope County		4					2	3		4
Pulaski County	3	2		5	4		3	4	7	1
Putnam County				1						
Randolph County	26	6	87	15	4	6	16	7	49	8
Richland County	3	2	1	2	6		4	5	15	2
Rock Island County	157	29	234	30	47	7	21	6	22	
Rock Island							10	2	4	
Moline							11	3	15	
Saline County	12	12	3	8	62	10	11	7	33	8
Sangamon County	72	20	20	15	38	7	47	7	50	6
Springfield							25	5	36	6
Schuyler County	4	1	4		2	2	2	1	1	1
Scott County	4	1		6			3	3	26	1
Shelby County	10	7	6	1	18	1	13	3	2	
Stark County			1		2				2	
St. Clair County	17	17	16	21	46	7	45	10	43	15
Belleville							4		7	5
East St. Louis							19	6	13	3
Stephenson County	12	5	1		3	1	3		28	6
Freeport							2		25	6
Tazewell County	18	5	5	3	20	2	3	3	10	2
Pekin							3	1	2	1
Union County	24	12	1	7	22	7	14	6	33	2
Vermilion County	45	12	36	7	24	5	26	13	36	9
Danville							11	8	11	5
Wabash County	6	7	21	2	22	4	8	4	12	1
Warren County	16	1	1		4	1	1		7	1
Washington County	12	1	4	2	14	3	4	3	16	2
Wayne County	8	6	4	5	16	3	27	4	12	4
White County	13	7	2	5	32	5	66	9	18	5
Whiteside County	4	2		1	2		6	1	23	3
Will County	17	14	43	7	116	13	39	9	112	11
Joliet							21	7	71	10
Williamson	29	15	7	12	60	14	47	20	87	12
Herrin									4	3
Winnebago	8	8	5	3	10	1	23	4	22	2
Rockford							14	4	17	
Woodford	2	3					5		8	
Total	1,942	581	1,229	462	2,293	386	1,787	370	2,401	337

SMALLPOX: REPORTED MORBIDITY AND MORTALITY.

The State	6,278	15	2,505	9	7,802	8	10,928	29	2,083	26
Adams County	410		18		57		52		23	
Quincy							26		18	
Alexander County	21		3		26		140		8	
Cairo							40		5	
Bond County	29		3		13		33			
Boone County	23				28		25			
Brown County	9		18		42		3			
Bureau County	68		4		19		59		31	
Calhoun County	1				77		2		4	
Carroll County	3				43		72		2	
Cass County	36		1		22		159		1	
Champaign County	37		69		39		41		9	
Champaign							12		4	
Urbana							17			
Christian	64	1	24	1	36		42		3	
Clark County	18		1		24		37		1	
Clay County			1		28		64	2	4	
Clinton County	147				2		30		7	
Coles County	15				16		32		3	
Mattoon							13		1	

SMALLPOX—Continued.

Fiscal year totals for State, counties and principal cities.	1917-1918		1918-1919		1919-1920		1920-1921		1921-1922	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Cook County.....	385	5	155	—	175	1	536	2	143	21
Berwyn.....	—	—	—	—	—	—	1	—	—	—
Blue Island.....	—	—	—	—	—	—	73	—	—	—
Chicago.....	—	—	—	—	—	—	294	—	116	—
Chicago Heights.....	—	—	—	—	—	—	2	—	2	—
Cicero.....	—	—	—	—	—	—	26	—	2	—
Frankston.....	—	—	—	—	—	—	12	—	—	—
Forest Park.....	—	—	—	—	—	—	8	—	—	—
Haywood.....	—	—	—	—	—	—	40	—	—	—
Oak Park.....	—	—	—	—	—	—	204	2	6	—
Crawford County.....	5	—	—	—	74	—	—	—	—	—
Cumberland County.....	21	—	2	—	15	—	4	—	—	—
DeKalb County.....	11	—	6	—	5	—	31	—	3	—
DeWitt.....	21	—	12	1	23	—	64	—	3	—
Douglas County.....	3	—	2	—	34	—	7	—	4	—
DuPage County.....	1	—	10	—	6	—	14	—	5	—
Edgar County.....	64	—	—	—	279	1	38	—	4	—
Edwards County.....	1	—	—	—	11	—	34	—	1	—
Effingham.....	5	—	2	—	44	—	21	—	39	—
Fayette County.....	102	—	18	—	37	—	197	—	29	—
Ford County.....	7	—	—	—	—	—	133	—	—	—
Franklin County.....	205	—	1	1	500	1	623	1	37	—
Fulton County.....	133	—	73	—	19	—	184	1	44	—
Canton.....	—	—	—	—	—	—	17	—	6	—
Gallatin County.....	27	—	3	—	90	—	75	—	1	—
Greene County.....	28	—	11	—	489	1	6	—	—	—
Grundy County.....	—	—	—	—	59	—	7	—	—	—
Hamilton County.....	34	—	1	1	589	—	80	1	—	—
Hancock County.....	35	—	1	—	28	—	188	—	12	—
Hardin County.....	51	—	—	—	30	—	28	—	—	—
Henderson County.....	15	—	1	—	28	—	12	—	—	—
Henry County.....	36	—	4	—	101	—	68	1	3	—
Kewanee.....	—	—	—	—	—	—	25	1	1	—
Iroquois County.....	39	—	2	—	6	—	47	—	15	—
Jackson County.....	244	—	11	—	103	—	402	1	36	—
Murphysboro.....	—	—	—	—	—	—	107	—	—	—
Jasper County.....	1	—	29	—	17	—	53	—	—	—
Jefferson County.....	30	—	—	—	81	—	120	—	52	—
Jersey County.....	31	1	—	—	72	—	52	—	7	—
JoDavies County.....	58	—	2	—	10	—	87	—	1	—
Johnson County.....	11	—	—	—	56	—	31	—	50	—
Kane County.....	17	—	191	1	30	—	32	—	11	—
Aurora.....	—	—	—	—	—	—	18	—	8	—
Elgin.....	—	—	—	—	—	—	13	—	2	—
Kankakee County.....	11	—	—	—	11	—	17	—	1	—
Kankakee.....	—	—	—	—	—	—	16	—	—	—
Kendall County.....	6	—	—	—	10	—	3	—	1	—
Knox County.....	27	—	96	—	283	—	130	—	3	—
Galesburg.....	—	—	—	—	—	—	41	—	2	—
Lake County.....	4	—	1	—	16	—	49	—	9	—
Waukegan.....	—	—	—	—	—	—	21	—	7	—
LaSalle County.....	18	—	27	—	49	—	187	—	9	—
LaSalle.....	—	—	—	—	—	—	1	—	—	—
Ottawa.....	—	—	—	—	—	—	106	—	3	—
Streator.....	—	—	—	—	—	—	80	—	7	—
Lawrence County.....	52	—	3	1	190	—	97	—	—	—
Lee County.....	6	—	34	—	4	—	27	—	65	—
Livingston County.....	5	—	3	—	6	—	57	—	14	—
Logan County.....	35	—	7	—	32	—	10	—	20	—
Lincoln.....	—	—	—	—	—	—	8	—	16	—
McDonough County.....	74	—	1	—	142	—	22	—	2	—
McHenry County.....	1	—	19	—	4	—	39	—	5	—
McLean County.....	47	—	60	—	11	—	410	—	16	—
Bloomington.....	—	—	—	—	—	—	168	—	—	—
Macon County.....	59	—	8	—	55	—	64	1	4	—
Decatur.....	—	—	—	—	—	—	10	1	3	—
Macoupin County.....	222	—	53	—	148	—	237	—	4	—
Madison County.....	567	2	63	2	71	—	254	5	18	3
Alton.....	—	—	—	—	—	—	15	—	1	—
Granite City.....	—	—	—	—	—	—	24	2	2	—
Marion County.....	57	—	57	—	12	—	87	—	127	—
Centralia.....	—	—	—	—	—	—	28	—	44	—

SMALLPOX—Concluded.

Fiscal year totals for State, counties and principal cities.	1917-1918		1918-1919		1919-1920		1920-1921		1921-1922	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Marshall County.....	9	---	61	---	3	---	8	---	8	---
Mason County.....	39	---	24	---	15	---	3	---	36	---
Massac County.....	18	---	---	---	72	1	174	1	---	---
Menard County.....	8	---	9	---	214	---	12	---	5	---
Mercer County.....	5	---	29	---	66	---	7	---	40	---
Monroe County.....	8	---	---	---	---	---	---	---	2	---
Montgomery County.....	52	---	89	---	21	---	155	---	28	---
Morgan County.....	36	1	67	---	234	---	39	---	---	---
<i>Jacksonville.</i>	---	---	---	---	---	---	18	---	---	---
Moultrie County.....	11	---	22	---	37	---	27	---	---	---
Ogle County.....	14	---	5	---	4	---	150	---	1	---
Peoria County.....	281	---	227	---	101	---	69	1	429	1
<i>Peoria.</i>	---	---	---	---	---	---	---	---	264	---
Perry County.....	42	---	3	---	78	---	50	---	4	---
Piatt County.....	9	---	---	---	8	---	23	---	1	---
Pike County.....	77	---	---	---	164	---	12	---	---	---
Pope County.....	---	---	---	---	13	---	14	---	---	---
Pulaski County.....	15	---	25	---	63	---	44	---	2	---
Putnam County.....	19	---	---	---	6	---	---	---	2	---
Randolph County.....	148	---	9	---	4	---	223	---	7	---
Richland County.....	4	---	22	---	29	---	301	1	---	---
Rock Island County.....	44	---	126	---	406	1	222	1	85	---
<i>Moline.</i>	---	---	---	---	---	---	78	---	8	---
<i>Rock Island.</i>	---	---	---	---	---	---	108	---	7	---
Saline County.....	419	3	17	---	383	---	120	---	25	---
Sangamon County.....	111	---	33	---	87	---	114	---	19	1
<i>Springfield.</i>	---	---	---	---	---	---	68	---	8	---
Schuyler County.....	4	---	---	---	25	---	25	---	---	---
Scott County.....	---	---	---	---	57	---	10	---	---	---
Shelby County.....	37	---	3	---	4	---	34	---	3	---
Stark County.....	29	---	---	---	4	---	1	---	3	---
St. Clair County.....	436	1	42	1	115	---	775	1	22	---
<i>Belleville.</i>	---	---	---	---	---	---	33	---	2	---
<i>East St. Louis.</i>	---	---	---	---	---	---	603	1	14	---
Stephenson County.....	21	---	8	---	17	---	236	1	7	---
<i>Freeport.</i>	---	---	---	---	---	---	189	1	6	---
Tazewell County.....	50	---	256	---	30	---	59	1	119	---
<i>Pekin.</i>	---	---	---	---	---	---	20	---	67	---
Union County.....	66	---	66	---	127	---	70	---	14	---
Vermilion County.....	66	---	75	---	94	---	138	---	6	---
<i>Panville.</i>	---	---	---	---	---	---	7	---	---	---
Wabash County.....	10	---	---	---	33	---	25	---	2	---
Warren County.....	18	---	7	---	320	1	21	---	3	---
Washington County.....	5	---	26	---	28	1	25	---	17	---
Wayne County.....	9	---	6	---	43	---	287	---	8	---
White County.....	15	---	67	---	189	---	145	---	8	---
Whiteside County.....	17	---	5	---	49	---	78	---	3	---
Will County.....	7	---	13	---	56	---	124	---	---	---
<i>Joliet.</i>	---	---	---	---	---	---	20	---	---	---
Williamson County.....	330	1	7	---	48	---	619	3	242	---
<i>Herrin.</i>	---	---	---	---	---	---	190	---	34	---
Winnebago County.....	82	---	38	---	43	---	629	1	6	---
<i>Rockford.</i>	---	---	---	---	---	---	591	---	4	---
Woodford County.....	14	---	7	---	9	---	13	---	21	---
Total.....	6,278	15	2,505	9	7,802	8	10,928	29	2,083	26

SCARLET FEVER: REPORTED MORBIDITY AND MORTALITY.

The State.....	7,584	259	3,634	162	16,810	324	19,765	361	13,947	261
Adams County.....	35	4	66	1	174	6	56	2	174	2
<i>Quincy.</i>	---	---	---	---	---	---	25	---	117	2
Alexander County.....	8	2	1	---	13	---	11	---	---	---
<i>Carro.</i>	---	---	---	---	---	---	---	---	1	---
Bond County.....	16	1	---	---	36	---	9	1	6	---
Boone County.....	18	---	4	---	22	---	53	1	34	---
Brown County.....	15	---	54	---	51	1	19	---	16	---

SCARLET FEVER—Continued.

Fiscal year totals for State, counties and principal cities.	1917-1918		1918-1919		1919-1920		1920-1921		1921-1922	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Bureau County	66	2	13	1	68	1	100	1	60	—
Calhoun County	12	1	2	—	27	1	5	—	1	—
Carroll County	19	—	18	—	8	—	22	—	34	—
Cass County	—	—	3	—	29	—	48	2	25	—
Champaign County	35	12	4	1	234	5	240	1	141	—
<i>Champaign</i>	—	—	—	—	—	—	69	1	41	1
<i>Urbana</i>	—	—	—	—	—	—	80	—	24	—
Christian County	22	3	18	1	89	—	256	1	250	3
Clark County	8	—	18	—	31	1	60	—	80	3
Clay County	5	—	4	—	55	—	9	—	17	—
Clinton County	29	1	—	—	27	1	30	1	9	—
Coles County	23	—	25	1	99	—	114	—	90	2
<i>Mattoon</i>	—	—	—	—	—	—	18	—	24	1
Cook County	3,664	142	2,317	89	9,741	194	7,992	188	5,296	44
<i>Berwyn</i>	—	—	—	—	—	—	52	—	16	—
<i>Blue Island</i>	—	—	—	—	—	—	100	6	22	—
<i>Chicago</i>	—	—	—	—	—	—	6,088	168	4,428	158
<i>Chicago Heights</i>	—	—	—	—	—	—	153	4	13	—
<i>Cicero</i>	—	—	—	—	—	—	114	2	75	—
<i>Evanston</i>	—	—	—	—	—	—	100	2	68	1
<i>Forest Park</i>	—	—	—	—	—	—	52	—	16	—
<i>Maywood</i>	—	—	—	—	—	—	74	—	29	—
<i>Oak Park</i>	—	—	—	—	—	—	280	5	82	—
Crawford County	8	—	—	—	41	—	108	3	190	—
Cumberland County	17	—	—	—	26	—	52	—	89	2
DeKalb County	34	3	50	1	58	—	100	1	76	—
DeWitt County	6	—	3	1	43	—	22	—	37	1
Douglas County	9	—	—	—	144	3	95	1	37	—
DuPage County	19	—	10	—	172	2	89	3	183	—
Edgar County	5	1	—	—	89	2	106	—	119	2
Edwards County	22	3	3	—	2	—	30	2	13	1
Effingham County	8	—	19	—	49	1	16	—	16	—
Fayette County	20	—	10	—	46	1	13	—	38	—
Ford County	33	2	15	—	44	2	104	1	69	—
Franklin County	9	—	2	—	24	—	37	—	60	5
Fulton County	112	1	2	—	90	—	296	5	127	1
<i>Clinton</i>	—	—	—	—	—	—	102	1	13	—
Gallatin County	2	—	1	—	5	—	2	—	9	—
Greene County	13	—	4	—	52	1	36	—	54	—
Grundy County	8	—	6	1	80	—	60	—	31	—
Hamilton County	10	—	—	—	64	—	24	—	35	—
Hancock County	32	—	5	1	77	—	61	—	53	—
Hardin County	—	—	—	—	1	—	—	—	—	—
Henderson County	6	1	1	—	31	—	24	—	26	—
Henry County	26	—	2	—	87	1	685	6	148	2
<i>Kewanee</i>	—	—	—	—	—	—	261	2	72	1
Iroquois County	22	1	6	1	75	2	114	3	69	2
Jackson County	56	—	7	—	86	—	88	—	16	—
<i>Murphysboro</i>	—	—	—	—	—	—	48	—	6	—
Jasper County	13	1	1	—	61	2	9	—	14	—
Jefferson County	54	1	2	—	43	1	18	1	28	—
Jersey County	73	1	—	—	11	—	31	—	9	—
JoDaviss County	16	3	49	1	28	—	80	1	27	—
Johnson County	—	—	—	—	11	—	9	—	20	2
Kane County	121	7	41	1	289	1	182	3	152	2
<i>Aurora</i>	—	—	—	—	—	—	28	1	53	1
<i>Elgin</i>	—	—	—	—	—	—	32	—	30	1
Kankakee County	53	1	20	2	39	1	84	1	56	1
<i>Kankakee</i>	—	—	—	—	—	—	7	1	7	—
Kendall	7	—	—	—	28	1	17	—	19	—
Knox	38	1	15	—	41	—	86	5	98	1
<i>Galesburg</i>	—	—	—	—	—	—	48	4	22	—
Lake County	118	10	24	4	159	4	158	7	215	3
<i>Waukegan</i>	—	—	—	—	—	—	33	1	56	—
LaSalle County	34	3	86	1	98	5	217	5	204	2
<i>LaSalle</i>	—	—	—	—	—	—	40	—	8	—
<i>Ottawa</i>	—	—	—	—	—	—	36	1	53	2
<i>Streator</i>	—	—	—	—	—	—	4	—	6	—
Lawrence County	4	—	4	1	37	—	90	2	38	—
Lee County	11	—	40	—	118	2	93	4	102	1
Livingston County	30	—	1	—	149	1	118	2	107	1

SCARLET FEVER—Concluded.

Fiscal year totals for State, counties and principal cities.	1917-1918		1918-1919		1919-1920		1920-1921		1921-1922	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Logan County.....	15	---	21	---	92	3	141	3	117	3
<i>Lincoln</i>	---	---	---	---	---	---	39	2	51	3
McDonough County.....	59	1	2	1	23	---	43	1	113	---
McHenry County.....	18	---	1	---	250	4	134	---	56	---
McLean County.....	17	3	23	2	243	---	461	6	147	---
<i>Bloomington</i>	---	---	---	---	---	---	165	1	29	---
Macon County.....	40	---	15	---	130	3	259	2	86	---
<i>Decatur</i>	---	---	---	---	---	---	185	---	64	---
Macoupin County.....	74	1	27	---	146	1	173	2	109	---
Madison County.....	111	---	25	5	229	5	117	15	197	2
<i>Alton</i>	---	---	---	---	---	---	46	2	69	---
<i>Granite City</i>	---	---	---	---	---	---	10	1	9	---
Marion County.....	18	3	1	1	23	---	28	---	75	---
<i>Centralia</i>	---	---	---	---	---	---	14	---	19	---
Marshall County.....	10	---	1	1	6	---	128	3	92	1
Mason County.....	66	2	7	2	40	---	158	---	121	1
Massac County.....	1	---	2	1	55	2	5	---	---	---
Menard County.....	3	---	7	---	50	---	97	4	68	---
Mercer County.....	92	1	9	---	2	---	15	---	16	---
Monroe County.....	9	---	2	---	52	---	2	1	2	---
Montgomery County.....	32	---	9	---	64	1	141	1	164	---
Morgan County.....	62	1	8	---	23	---	268	2	183	---
<i>Jacksonville</i>	---	---	---	---	---	---	108	1	71	---
Moultrie County.....	16	---	1	---	47	---	47	---	51	---
Ogle County.....	23	2	48	1	75	2	218	4	120	---
Peoria.....	95	---	44	5	488	14	1,037	14	389	8
<i>Peoria</i>	---	---	---	---	---	---	672	5	221	6
Perry County.....	20	2	1	---	18	1	33	---	8	---
Platt County.....	21	---	12	---	50	2	42	3	29	---
Pike County.....	29	---	3	---	14	8	31	1	71	---
Pope County.....	2	---	---	---	---	---	3	---	---	---
Pulaski County.....	8	---	---	---	2	---	---	1	---	---
Putnam County.....	---	---	---	---	4	---	28	1	18	---
Randolph County.....	38	1	34	---	---	---	31	1	7	---
Richland County.....	11	---	2	1	15	1	15	1	18	---
Rock Island.....	193	5	27	3	97	2	155	1	86	1
<i>Moline</i>	---	---	---	---	---	---	28	---	28	---
<i>Rock Island</i>	---	---	---	---	---	---	72	1	29	---
Saline County.....	3	---	11	---	36	---	39	---	54	---
Sagammon County.....	35	---	39	2	246	4	1,338	14	193	4
<i>Springfield</i>	---	---	---	---	---	---	1,040	11	108	1
Schuyler County.....	10	---	1	---	9	---	48	---	119	---
Scott County.....	3	1	---	---	1	---	9	---	22	---
Shelby County.....	12	1	2	1	51	3	56	---	50	1
Stark County.....	13	---	7	1	10	---	72	---	16	---
St. Clair County.....	161	3	50	3	94	4	308	4	148	1
<i>Belleville</i>	---	---	---	---	---	---	46	---	13	---
<i>East St. Louis</i>	---	---	---	---	---	---	171	2	84	1
Stephenson County.....	24	2	15	3	48	6	99	1	145	1
<i>Freeport</i>	---	---	---	---	---	---	35	1	86	1
Tazewell County.....	18	---	10	---	85	1	307	3	221	2
<i>Pekin</i>	---	---	---	---	---	---	131	---	69	---
Union County.....	2	1	3	---	13	---	27	---	8	---
Vermilion County.....	58	2	9	---	86	4	202	2	466	4
<i>Danville</i>	---	---	---	---	---	---	34	1	115	1
Wabash County.....	28	1	1	1	22	2	14	---	27	1
Warren County.....	7	---	21	---	38	---	53	1	98	---
Washington County.....	59	3	3	---	27	---	68	---	6	---
Wayne County.....	7	1	1	---	9	---	23	---	29	---
White County.....	1	---	---	---	15	---	8	---	3	---
Whiteside County.....	118	4	6	1	58	1	116	1	100	6
Will County.....	159	3	19	1	121	2	183	3	181	2
<i>Joliet</i>	---	---	---	---	---	---	72	2	90	---
Williamson County.....	26	---	---	---	43	2	49	---	290	26
<i>Herrin</i>	---	---	---	---	---	---	4	---	32	---
Winnebago County.....	726	10	123	10	305	3	378	6	493	8
<i>Rockford</i>	---	---	---	---	---	---	320	5	341	6
Woodford County.....	7	---	4	5	25	---	85	4	137	1
Total.....	7,584	259	3,634	162	16,810	324	19,765	361	13,947	261

WHOOPIING COUGH: REPORTED MORBIDITY AND MORTALITY.

Fiscal year totals for State, counties and principal cities.	1917-1918		1918-1919		1919-1920		1920-1921		1921-1922	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
The State.....	14,306	708	7,140	424	13,275	444	16,165	549	8,336	264
Adams County.....	74	---	137	4	59	7	8	3	65	---
Quincy.....	---	---	---	---	---	---	4	1	21	---
Alexander County.....	89	3	11	3	25	---	3	3	10	---
Carro.....	---	---	---	---	---	---	---	5	8	---
Bond County.....	22	---	130	---	---	---	97	4	7	---
Boone County.....	---	---	36	---	49	---	16	1	25	---
Brown County.....	1	---	7	---	177	2	11	---	1	---
Bureau County.....	85	4	110	3	17	2	189	2	79	---
Calhoun County.....	---	1	15	8	173	11	---	2	---	---
Carroll County.....	52	4	69	1	31	1	17	---	1	1
Cass County.....	32	4	5	---	---	---	11	---	102	3
Champaign.....	75	6	60	2	221	7	193	3	127	2
Champaign.....	---	---	---	---	---	---	29	1	75	1
Urbana.....	---	---	---	---	---	---	26	---	22	1
Christian County.....	14	5	5	3	26	4	37	2	23	3
Clark County.....	26	6	2	1	44	---	19	3	2	---
Clay County.....	26	3	130	11	118	6	70	---	98	---
Clinton County.....	14	3	12	6	71	3	48	10	---	1
Coles County.....	193	9	41	2	43	1	155	5	16	1
Mattoon.....	---	---	---	---	---	---	82	---	7	---
Cook County.....	7,027	272	3,453	147	6,858	209	5,766	164	4,322	166
Berwyn.....	---	---	---	---	---	---	59	---	9	---
Blue Island.....	---	---	---	---	---	---	29	---	10	---
Chicago.....	---	---	---	---	---	---	4,110	130	2,836	99
Chicago Heights.....	---	---	---	---	---	---	14	---	6	---
Cicero.....	---	---	---	---	---	---	108	4	156	8
Evanston.....	---	---	---	---	---	---	288	3	242	1
Forest Park.....	---	---	---	---	---	---	67	---	27	---
Maywood.....	---	---	---	---	---	---	41	---	31	4
Oak Park.....	---	---	---	---	---	---	379	---	461	2
Crawford County.....	118	1	15	2	9	1	29	3	3	---
Cumberland County.....	49	7	7	---	19	2	11	---	1	---
DeKalb County.....	129	11	20	1	62	---	129	2	12	---
DeWitt County.....	24	---	21	---	39	1	76	6	22	1
Douglas County.....	27	5	61	3	40	1	49	4	53	---
DuPage County.....	166	1	43	---	328	---	214	1	63	1
Edgar County.....	72	3	5	---	5	1	147	7	9	---
Edwardsville.....	73	---	1	---	21	1	25	3	4	---
Effingham County.....	15	4	11	---	14	3	6	2	26	1
Fayette County.....	22	3	11	2	31	1	61	5	55	2
Ford County.....	50	2	2	1	123	7	3	1	21	1
Franklin County.....	59	10	116	10	103	8	228	4	119	10
Fulton County.....	98	4	39	7	91	5	140	2	75	6
Canton.....	---	---	---	---	---	---	13	1	19	---
Gallatin County.....	15	3	1	---	27	---	10	1	43	1
Greene County.....	63	4	3	3	28	1	59	---	1	---
Grundy County.....	51	2	33	3	13	---	158	2	22	---
Hamilton County.....	11	---	5	1	18	3	38	2	33	2
Hancock County.....	39	2	23	1	175	7	209	2	27	---
Hardin County.....	14	3	1	3	---	---	4	---	---	1
Henderson County.....	135	1	29	---	10	1	46	1	12	1
Henry County.....	127	6	78	---	128	2	419	6	95	---
Kewanee.....	---	---	---	---	---	---	133	1	46	---
Iroquois County.....	90	1	12	1	45	2	198	3	18	2
Jackson County.....	23	5	12	5	12	2	20	6	93	7
Murphysboro.....	---	---	---	---	---	---	42	---	1	---
Jasper County.....	8	---	14	1	11	---	57	2	9	1
Jefferson County.....	10	8	45	4	28	1	39	1	11	2
Jersey County.....	70	---	9	---	10	---	3	---	23	---
Jo Daviess County.....	46	1	25	---	66	2	18	1	4	1
Johnson County.....	10	---	45	4	28	1	39	1	11	2
Kane County.....	483	21	38	3	361	1	439	6	92	2
Aurora.....	---	---	---	---	---	---	134	4	56	1
Elgin.....	---	---	---	---	---	---	118	1	20	---
Kankakee County.....	118	2	25	2	166	1	190	5	67	2
Kankakee.....	---	---	---	---	---	---	43	4	30	1
Kendall County.....	44	3	15	2	---	---	120	1	55	---
Knox County.....	61	4	3	2	98	4	171	3	53	2
Galesburg.....	---	---	---	---	---	---	148	1	35	---

WHOOPIING COUGH—Continued.

Fiscal year totals for State, counties and principal cities.	1917-1918		1918-1919		1919-1920		1920-1921		1921-1922	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Lake County.....	143	4	115	4	65	1	176	8	91	1
Waukegan.....							25	4	30	1
LaSalle County.....	176	8	41	10	67	2	350	10	11	1
LaSalle.....							29	2		
Ottawa.....							36	1	1	
Streator.....							18	1	4	
Lawrence County.....	116	1	20	8	21	7	39	5	2	
Lee County.....	43	1	6	3	41	3	89	1	30	
Livingston County.....	57	3	8		58	4	226	4	18	
Logan County.....	51	4	6		50	1	74	4	49	2
Lincoln.....							20	1	28	1
McDonough County.....	52	3	3	1	109	3	59	1	30	1
McHenry County.....	133	12	23	1	42	2	181	2	86	1
McLean County.....	177	4	45	1	234	3	421	10	188	
Bloomington.....							82	4	122	
Macon County.....	124	7	55	3	228	6	285	6	36	
Decatur.....							114	3	29	
Macoupin County.....	134	7	56	6	123	9	160	10	35	10
Madison County.....	218	20	63	11	109	4	199	15	37	4
Alton.....							25	2	18	1
Granite City.....							1			
Marion County.....	117	8	31	4	29	3	93	7	37	
Centralia.....							18	1	13	
Marshall County.....	1	1	108			1	10		15	
Massac County.....	11		4	1	223	2	6		24	
Massac County.....	10	3	4	1	3	2	12	5	9	2
Menard County.....	20		16	2	19	1	47		41	2
Merced County.....	34	1	22	1	63	2	108		6	
Monroe County.....			8	1	2		8			1
Montgomery County.....	25	2	36	4	117	1	65		54	2
Morgan County.....	91	8	6		44	1	133	2	74	
Jacksonville.....							77	1	21	
Moultrie County.....	19		15	3	12		74	2	6	
Ogle County.....	52	2	33		42	1	95	3	5	
Peoria County.....	135	14	112	6	242	4	73	11	108	2
Peoria.....							7	4	62	1
Perry County.....	6	12	2		10	1	77	5	8	1
Piatt County.....	107	1	13		81	1	96	2		
Pike County.....	15	3	160	2	50	1	6		4	
Pope County.....	8		12	1	5					
Pulaski County.....	18	13	16	2	4	1	21		8	
Putnam County.....			2		2		8	1		
Randolph County.....	163	5	37	7	19	1	64	8	1	
Richland County.....	30	2	5		5	1				
Rock Island County.....	250	15	103	4	377	11	262	8	111	1
Moline.....							78	3	12	1
Rock Island.....							106	3	39	
Saline County.....	7	10	91	15	64	8	10	5	52	16
Sangamon County.....	206	9	45	1	38	2	451	4	251	5
Springfield.....							62		205	5
Schuyler County.....	26	4			50	1		1	8	1
Scott County.....	44	2			1		2	2	4	
Shelby County.....	44	4	17	1	68	2	273	7	59	1
Stark County.....	13		8	1	14		26	1	12	
St. Clair County.....	90	18	116	10	44	5	244	25	90	5
Belleville.....							8	4	4	
East St. Louis.....							76	21	36	3
Stephenson County.....	13	1	119	2	55	3	100	2	121	
Freeport.....							68	1	88	
Tazewell County.....	74		17	3	44	8	82	4	92	
Pekin.....									4	
Union County.....	51	5	39	2	1		47		6	3
Vermilion County.....	370	12	136	16	147	8	314	32	14	
Danville.....							27	12	4	
Wabash County.....	185	3	23	1	19		95	1	5	
Warren County.....	54	2		1			25	3	16	2
Washington County.....		4		1	26	1	33	2	25	
Wayne County.....	5	5	16			1	15	1	23	
White County.....	25	4	25	1		1	16	1	7	1
Whiteside County.....	52	3	111	4	54	1	245	6	58	1
Will County.....	177	7	16	7	28	1	442	16	43	
Joliet.....							168	10	13	

WHOOPIING COUGH—Concluded.

Fiscal year totals for State, counties and principal cities.	1917-1918		1918-1919		1919-1920		1920-1921		1921-1922	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Williamson County.....	87	7	35	17	25	7	122	4	132	16
<i>Herrin</i>									1	2
Winnebago County.....	124	10	57	2	47	4	299	6	180	2
<i>Rockford</i>							189	4	139	1
Woodford County.....	85	2	47		16		30	2	10	1
Total.....	14,306	708	7,140	424	13,275	444	16,165	549	8,336	264

DIPHTHERIA: REPORTED MORBIDITY AND MORTALITY.

The State.....	11,000	1,527	8,060	979	12,876	1,061	16,764	1,243	19,901	1,258
Adams County.....	83	10	39	4	64	8	49	4	49	8
<i>Quincy</i>							45	1	29	4
Alexander County.....	10	2	2	2	86	9	24	3	43	3
<i>Cairo</i>							7	1	1	
Bond County.....	2	1		1	13	2	42	2	50	1
Boone County.....	13	1	8	1	10		15	2	14	1
Brown County.....	19	1					3		3	
Bureau County.....	42	3	7	1	23	2	48	7	132	4
Calhoun County.....	3	2	3	4	10	3			27	
Carroll County.....	4				10		14		32	
Cass County.....	7	3	8	3	29	1	16	1	94	
Champaign County.....	51	4	84	7	22	4	15	2	80	
<i>Champaign</i>							10	1	10	
<i>Urbana</i>							5	1	6	
Christian County.....	13	2	1	4	53	1	59	5	76	4
Clark County.....	3	2	1		23	3	13	2	66	6
Clay County.....	4				15		16	3	83	5
Clinton County.....	22	4		1	26	4	95	6	41	1
Coles County.....	39	4	44	5	32	2	37	2	293	6
<i>Mattoon</i>							11		167	5
Cook County.....	7,985	1,058	6,628	665	8,219	668	10,819	762	9,674	712
<i>Berwyn</i>							19		43	4
<i>Blue Island</i>							31	5	217	8
<i>Chicago</i>							9,670	698	8,123	626
<i>Chicago Heights</i>							62	4	52	6
<i>Cicero</i>							174	7	257	20
<i>Evanston</i>							213	14	106	8
<i>Forest Park</i>							66		41	5
<i>Maywood</i>							40		83	2
<i>Oak Park</i>							129	6	92	
Crawford County.....	2	3	2	2	18		28	2	131	5
Cumberland County.....	5	1			38	2	30	4	20	
DeKalb County.....	29	3	35	1	17	3	14		37	1
DeWitt County.....	3	1	5	1	20	1	14	4	78	3
Douglas County.....	6		3	1	63	1	13	1	144	2
DuPage County.....	12		10	3	13	2	76	9	50	6
Edgar County.....	14	2	47		8	2	22	3	75	4
Edwards County.....	2	1			27	3	15	2	93	
Effingham County.....	44	6	2	2	40	4	14	2	97	1
Fayette County.....	8	2	1	1	21	3	19	4	37	9
Ford County.....	8	1	3	2	5	2	13		25	1
Franklin County.....	19	12		6	36	10	38	16	112	14
Fulton County.....	45	10	9	6	45	2	94	8	147	7
<i>Canton</i>							24	2	41	1
Gallatin County.....	2	2	2	2	26	9	12	5	45	3
Greene County.....	39	3	17	4	8	1	6		171	9
Grundy County.....	1	1	1		27	2	3	1	26	3
Hamilton County.....	1	1	3	1	20	3	63	5	84	7
Hancock County.....	18	2	3	2	8	2	12	2	9	1
Hardin County.....	2	3			1	3	10	4	3	3
Henderson County.....					2	1			78	2
Henry County.....	20	3	3	2	76	1	213	16	87	1
<i>Kewanee</i>							119	14	56	1
Iroquois County.....	9	2	11	1	70	4	57	4	88	4
Jackson County.....	30	5	2	2	17	12	203	12	210	14
<i>Murphysboro</i>							37		41	4

DIPHTHERIA—Continued.

Fiscal year totals for State, counties and principal cities.	1917-1918		1918-1919		1919-1920		1920-1921		1921-1922	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Jasper County	8	7	1	1	12	2	11	1	27	2
Jefferson County	3	2	5	3	54	6	17	5	58	10
Jersey County	11	1					4		48	2
Jo Daviess County	2	5	1	2	3	2	7	4	30	2
Johnson County	67	9	62	12	22	2	21	4	25	3
Kane County					85	8	147	8	467	13
Aurora							36	6	340	10
Elgin							73	3	61	2
Kankakee County	86	4	22		62	7	90	8	96	4
Kankakee							10		22	1
Kendall County	2				13		10			
Knox County	9	12	4	2	44	3	72	2	129	6
Galesburg							30	1	89	2
Lake County	59	20	32	22	26	5	130	6	225	18
Waukegan							62		96	12
LaSalle County	241	26	52	9	165	5	51	7	430	20
LaSalle							13		54	3
Ottawa							3	1	68	5
Streator							7		170	4
Lawrence County	3	2		4	4	2	43	3	247	15
Lee County	3		2		14	2	11	1	3	1
Livingston County	18	1	6		33	4	47	3	40	1
Logan County	26	6	25	2	57	6	23	1	85	2
Lincoln							12		44	2
McDonough County	15	1	3		15		10	1	39	2
McHenry County	30	2	7		146	4	59	5	52	
McLean County	44	9	4	2	154	6	137	9	163	7
Bloomington							19	2	97	3
Macon County	18	5	43	13	137	8	252	17	342	16
Decatur							206	16	266	12
Macoupin County	36	5	37	4	117	7	158	9	89	2
Madison County	244	29	39	12	359	27	267	25	458	22
Alton							129	13	100	4
Granite City							16		67	5
Marion County	18		2	3	178	8	211	4	94	6
Centralia							12	3	26	1
Marshall County	1	1		3	5	1	47	3	45	2
Mason County			4		18	1	12		90	1
Massac County	16	4	28	3	47	4	72	6	70	4
Menard County	3		1	1	20	3	6	1	38	1
Mercer County					4		10		15	
Monroe County	4	1			8		27		33	1
Montgomery County	24	2	3	3	65	4	117	4	75	3
Morgan	7	2		1	18	2	43	1	47	1
Jacksonville							42		54	1
Moultrie County	2			1	7	1	10		35	1
Ogle County	15	2	14	2	3		10	1	29	5
Peoria County	266	30	118	9	308	20	219	27	394	18
Peoria							168	24	251	11
Perry County	20	3			37	2	79	2	75	3
Piatt County	7	1			1		207	3	24	2
Pike County	14	1	11	6	9	3	13	4	93	8
Pope County	9	1			1		1	2	11	7
Pulaski County				1	8	3	20	6	38	1
Putnam County	25	2	1	3	7	3	7	5	101	4
Randolph County	25	5	9	2			47	4	69	
Richland County	2	1	3	1	43	2	152	5	78	8
Rock Island County	142	17	49	18	109	6	82	2	12	1
Moline							60	2	22	3
Rock Island							60	2	22	3
Saline County	36	17	8	2	103	12	112	19	143	23
Sangamon County	47	7	93	12	159	18	63	7	188	12
Springfield							41	2	110	7
Schuyler County	4	1			15	5	2		4	
Scott County	8		1		2		32	2	8	
Shelby County	7	3	1		2		3		20	1
Stark County	7	3			2		257	21	355	17
St. Clair County	216	24	67	22	290	19	40		70	2
Bellefonte							133	7	174	11
East St. Louis							59	5	184	10
Stephenson County	26	1	9	2	30	4	45	4	146	8
Freeport										

DIPHTHERIA—Concluded.

Fiscal year totals for State, counties and principal cities.	1917-1918		1918-1919		1919-1920		1920-1921		1921-1922	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Tazewell County.....	36	6	65	8	43	1	43	3	157	7
<i>Pekin</i>							33	1	105	4
Union County.....	10	4		1	67	4	109	9	126	11
Vermilion County.....	77	11	56	9	39	1	55	5	254	13
<i>Danville</i>							18		37	4
Wabash County.....	9	1	1	1	4	1	77	3	47	2
Warren County.....	3	2	13	3	5		10	1	26	2
Washington County.....	15	2	2	2	26	1	57	5	100	
Wayne County.....	11				13	2	107	11	124	11
White County.....	19	4	1	5	44	4	76	15	76	12
Whiteside County.....	16	3	11	4		1	12	2	24	1
Will County.....	161	31	64	7	116	13	192	17	256	3
<i>Joliet</i>							98	9	133	11
Williamson County.....	45	7	5	4	82	16	126	14	218	22
<i>Herrin</i>							64		88	8
Winnebago County.....	106	10	91	15	148	11	95	5	381	11
<i>Rockford</i>							89	4	354	9
Woodford County.....	3	9		1	9		18	1	19	3
Total.....	11,000	1,527	8,060	979	12,876	1,061	16,764	1,243	10,901	1,258

MEASLES: REPORTED MORBIDITY AND MORTALITY.

The State.....	20,498	352	15,804	276	33,555	429	33,676	353	14,862	142
Adams County.....	277	3		2	21		662	9	10	
<i>Quincy</i>							484	6	6	
Alexander County.....	21	2	8	9	229	8	1		2	
<i>Cairo</i>							1		2	
Bond County.....	17	2	1	1	166	1	4			
Boone County.....	99		13		200		24		5	
Brown County.....	177		1		12		32		1	
Bureau County.....	432	4	1	1	65	1	485	3	19	
Calhoun County.....	3		17	1	18		13			
Carroll County.....	107			1	38		27		2	
Cass County.....	42	2	1		151	3	64	1	2	
Champaign County.....	267	1	8	4	242	1	317	1	25	
<i>Champaign</i>							147		10	
<i>Urbana</i>							16		4	
Christian County.....	124	1	29		218	3	77	1	6	
Clark County.....	156		1		74	2	3		4	
Clay County.....	108	2	4		50		339	3		
Clinton County.....	13				32	2	9	2	16	
Coles County.....	448	7	32	4	408	4	48		8	
<i>Mattoon</i>							8		1	
Cook County.....	3,344	74	14,460	177	11,789	129	13,408	146	11,576	122
<i>Berwyn</i>							153		7	
<i>Blue Island</i>							23	1	54	1
<i>Chicago</i>							10,090	117	9,678	158
<i>Chicago Heights</i>							7		21	1
<i>Cicero</i>							448	4	102	
<i>Evanston</i>							108		102	
<i>Forest Park</i>							171		51	1
<i>Maywood</i>							204		47	1
<i>Oak Park</i>							1,343	1	272	
Crawford County.....	60	1			97	3	2		1	
Cumberland County.....	66	1	1			1	3		2	
DeKalb County.....	154	6	2	1	133	1	101		72	
DeWitt County.....	24		4	1	79	1	96	1	7	
Douglas County.....	41	2	1	1	147	30	30		17	
DuPage County.....	166		8		469	1	335		431	
Edgar County.....	91	5		1	163		98	2	7	
Edwards County.....	8		7	1	95	4	29	1	5	
Efingham County.....	4		1		116	2	51	1	1	1
Fayette County.....	72	4	4	3	346	8	49	1	1	1
Ford County.....	14		1		130		133		8	
Franklin County.....	85	3		4	630	41	177	4	12	1
Fulton County.....	536	19	4		49	1	105		7	1
<i>Canton</i>							6		5	1

MEASLES—Continued.

Fiscal year totals for State, counties and principal cities.	1917-1918		1918-1919		1919-1920		1920-1921		1921-1922	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Gallatin County.....	62				18		109	3	2	
Greene County.....	46	3		1	24		54		3	2
Grundy County.....	51	1			6	1	87		38	
Hamilton County.....	6	1		3	104		69		1	
Hancock County.....	216	5	1	3	51		496	2	15	1
Hardin County.....		2		2	8	2	32	5		
Henderson County.....	141		4		21		21		8	
Henry County.....	496	6	23		145	2	701	2	28	
<i>Kewanee</i>							365	2	17	
Iroquois County.....	38		25	1	152	1	64		43	
Jackson County.....	19	2	1		333	7	11	1		
<i>Murphysboro</i>									1	
Jasper County.....	100	2		2	34		108		1	
Jefferson County.....	41	2	1	1	74	2	174	9	7	
Jersey County.....	65	2	1		9		146	2	19	
Jo Daviess County.....	101				57	1	12		3	
Johnson County.....	1	1		1	34	1	18			
Kane County.....	319	6	8		461	1	1,953	11	464	4
<i>Aurora</i>							208	1	392	3
<i>Elgin</i>							840	2	14	
Kankakee County.....	106		3		410	3	264	4	11	
<i>Kankakee</i>							84		4	
Kendall County.....	41				16		87		266	
Knox County.....	234	2	176	2	80	1	900	2	24	1
<i>Galesburg</i>							650	2	24	1
Lake County.....	185	23	20	9	519	8	448	13	97	1
<i>Waukegan</i>							74	3	45	1
LaSalle County.....	783	13	11	1	478	3	259	6	84	
<i>LaSalle</i>							10		7	
<i>Ottawa</i>							5		2	
<i>Streator</i>							99	4	1	
Lawrence County.....	40	2		1	223	4	74	3	42	
Lee County.....	67		1		253	2	21		109	1
Livingston County.....	99	2	3		387	1	73	1	23	
Logan County.....	111	5		2	274	7	155		37	
<i>Lincoln</i>							71		11	
Macon County.....	81	1	1		1,580	9	78		23	
<i>Decatur</i>							50		17	
Macoupin County.....	88	1	3		118		997	9	13	
Madison County.....	238	2	10		311	9	363	3	35	
<i>Alton</i>							141		16	
<i>Granite City</i>							8	2	2	
Marion County.....	10	1	16	2	460	4	53	2	72	
<i>Centralia</i>							40		5	
Marshall County.....	465	3	12		18		25		35	
Mason County.....	35		6		1		6		2	
Massac County.....	16		17	1	53	4	8	2	10	
McDonough County.....	479	6	1		6		144		8	
McHenry County.....	67	1	67	1	398	3	205		35	
McLean County.....	183	2	5	2	517		1,700	6	237	1
<i>Bloomington</i>							765	6	15	
Menard County.....	111		7		14		25	1	4	
Mercer County.....	242	2			4		424	2	7	
Monroe County.....	3				91	4	11			
Montgomery County.....	79	1	12	1	342	3	566	5	6	
Morgan County.....	87	2	1		137		592	4	5	1
<i>Jacksonville</i>							326	2	1	1
Moultrie County.....	34		4		109	2	57	2		
Ogle County.....	194				268	1	142		3	
Peoria County.....	259	8	14	3	553	6	168	1	148	
<i>Peoria</i>							60		49	
Perry County.....	7	1	1	1	59	8	15	1		
Piatt County.....	10		1		448	2	18		1	
Pike County.....	144	2			102		395	1	39	1
Pope County.....					25		10			
Pulaski County.....	38	4			131	2	20	1	5	
Putnam County.....	11	4			3		7		14	
Randolph County.....	26	2	10	1	14	6	15		2	
Richland County.....										
Rock Island County.....	1,151	15	14	1	1,297	5	361	1	36	1
<i>Moline</i>							193		21	1
<i>Rock Island</i>							48		4	

MEASLES—Concluded.

Fiscal year totals for State, counties and principal cities.	1917-1918		1918-1919		1919-1920		1920-1921		1921-1922	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Saline County	125	7			526	6	479	24		
Sangamon County	979	13	13	1	233	8	500	8	46	1
Springfield							287	2	14	
Schuyler	102	3			4		10		1	
Scott County	12				2		83	1	6	1
Shelby County	210	4			254	1	75	1	6	
Stark County	21	1	3		9		172			
St. Clair County	305	7	31	3	1,570	23	117	3	44	1
Belleville							3		1	
East St. Louis							83	2	36	1
Stephenson County	79		37	2	56		243		11	
Freeport							180		9	
Tazewell County	128	1	8		137		31		20	
Pekin							4		3	
Union County	29	3	2		85	1	6	2	15	
Vermilion County	916	5	3	2	815	21	41		17	
Danville							7		4	
Wabash County	19		2		97	5	18	1	3	
Warren County	515	5	1		6		146	2	1	
Washington County	226				142	1	13		9	
Wayne County	188		2	2	157		17			
White County	20	1			13	1	59	1	2	
Whiteside County	107		13		1,030	6	158	4	23	1
Will County	523	10	8	1	398	4	787	19	153	1
Joliet							373	10	28	1
Williamson County	436	5			397	18	41	1	10	
Herrin							1		2	
Winnebago County	715	9	490	9	206	2	631	4	168	
Rockford							585	5	162	
Woodford County	484	1	3		15		329		5	
Total	20,498	352	15,804	276	33,555	429	33,676	353	14,862	142

TUBERCULOSIS (ALL FORMS): REPORTED MORBIDITY AND MORTALITY.

The State	13,417	8,402	16,195	7,820	18,286	6,741	13,265	5,594	15,494	4,662
Adams County	18	59	9	64	42	61	76	53	148	37
Quincy							63	34	118	20
Alexander County		60	3	62	9	77	9	40	17	33
Cairo							6	27	16	29
Bond County	13	21	1	4	13	14	11	10	16	10
Boone County		6	3	7	22	9	2	8	17	7
Brown County	6	9		7	3	11	2	4	3	7
Bureau County	11	22		21	47	31	78	23	58	12
Calhoun County		10		9	6	7	1	5		1
Carroll County	7	12	3	5	17	8	4	4	3	4
Cass County	9	14	8	12	8	9	3	6	6	10
Champaign County	10	48	12	51	83	36	54	24	39	13
Champaign							42	8	16	4
Urbana							1	8	6	3
Christian County	3	37	7	35	42	24	11	21	56	17
Clark County	1	13		24	10	23	6	16	17	11
Clay County	7	16	1	18	40	22	32	18	202	6
Clinton County	6	18	5	14	6	14	9	17	3	9
Coles County	22	31	7	40	37	21	41	38	37	25
Mattoon							33	13	11	7
Cook County	12,509	4,737	15,050	4,308	13,840	3,646	10,287	2,940	11,081	2,708
Berwyn									4	7
Blue Island							12	2	5	8
Chicago							10,047	2,347	10,760	2,303
Chicago Heights							6	12	3	6
Cicero							30	23	77	13
Evanston							21	23	23	16
Forest Park							6		6	2
Maywood							25		28	6
Oak Park							58	16	31	10
Crawford County	13	24	1	13	15	16	10	11	28	15

TUBERCULOSIS (ALL FORMS)—Continued.

Fiscal year totals for State, counties and principal cities.	1917-1918		1918-1919		1919-1920		1920-1921		1921-1922	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Cumberland County	8	22		12	10	5	2	12	4	7
DeKalb County	1	27		29	33	26		19	12	12
DeWitt County	1	13	77	19	20	13	11	9	21	4
Douglas County	8	13	2	18	69	11	25	11	10	5
DuPage County	17	25	3	39	71	23	28	19	73	25
Edgar County	2	26		19	5	25	20	20	20	17
Edwards County	5	11	4	9	46	16	20	8	5	5
Effingham County		22	2	23	21	23	2	18	12	12
Fayette County	1	44	6	26	14	22	19	24	8	14
Ford County	5	16	2	12	8	11	4	7	8	2
Franklin County	19	34	8	38	25	53	61	40	26	36
Fulton County	4	39	10	31	31	25	45	28	70	19
<i>Canton</i>							7	7	41	6
Gallatin County	4	18	2	5	9	16	12	10	2	5
Greene County	6	19	1	17	7	20	38	14	10	13
Grundy County	2	15	2	21	27	8	65	9	20	55
Hamilton County	2	22	3	15	15	24	3	22	5	12
Hancock County	3	10	1	19	15	18	9	14	15	10
Hardin County		16		18	1	9	2	11	2	3
Henderson County	7	2	1	5	2	3	4	2	9	3
Henry County	6	28	3	27	21	24	27	32	45	18
<i>Kewanee</i>							7	7	26	13
Iroquois County	6	14	2	22	26	15	9	14	16	11
Jackson County	11	42	4	56	36	36	38	35	28	36
<i>Murphysboro</i>							12	5	13	
Jasper County	1	13	2	15	77	12	47	7	24	7
Jefferson County	16	48	2	36	28	40	2	45	17	33
Jersey County	7	9	4	11	2	6	5	8	3	2
JoDavies County	1	12	2	5	7	11	4	12	4	5
Johnson County	4	18	1	12	30	6	17	9	28	6
Kane County	20	118	10	108	254	98	53	97	222	65
<i>Aurora</i>							22	28	131	12
<i>Elgin</i>							24	45	40	37
Kankakee County	39	99	1	77	165	90	70	79	101	49
<i>Kankakee</i>							6	16		6
Kendall County	1	8		6	9	5	7	3	11	5
Knox County	4	30	11	49	13	43	17	28	37	18
<i>Galesburg</i>							14	17	29	12
Lake County	16	59	1	35	21	68	13	37	26	32
<i>Waukegan</i>							6	9	14	11
LaSalle County	20	99	17	87	79	81	69	72	83	66
<i>LaSalle</i>							28	7	25	5
<i>Ottawa</i>							3	10	10	4
<i>Streator</i>							4	6	5	16
Lawrence County	9	14	2	21	26	18	15	15	25	26
Lee County	6	15		10	50	13	17	17	25	15
Livingston County	5	18	1	18	28	15	11	12	10	14
Logan County	18	100	15	113	410	71	5	36	332	39
<i>Lincoln</i>							2	31	45	53
McDonough County	2	19	4	22	20	12	9	19	17	14
McHenry County	9	22		23	20	23	10	26	15	14
McLean County	18	57	23	59	94	51	89	48	145	33
<i>Bloomington</i>							81	26	117	16
Macon County	2	66	21	61	52	67	55	46	126	22
<i>Decatur</i>							42	37	114	17
Macoupin County	6	31	9	51	36	29	7	16	18	18
Madison County	21	141	18	156	197	111	65	84	86	63
<i>Alton</i>							37	19	37	10
<i>Granite City</i>								15	30	9
Marion County	11	47	367	42	70	43	74	28	50	28
<i>Centralia</i>							27	6	27	17
Marshall County		3	38	5	4	5	1	9	6	7
Mason County	3	11	1	12	11	11	33	14	27	11
Massac County	10	34	1	27	25	19	34	18	40	17
Menard County	3	13	12	21	20	12	5	10	8	2
Mercer County	2	8	2	10	9	12	1	5	9	4
Monroe County		9		6	1	8	10	3	3	4
Montgomery County	4	48	6	37	18	30	68	26	77	22
Morgan County	10	79	14	79	42	52	98	42	46	40
<i>Jacksonville</i>							89	35	21	32
Moultrie County	2	15	1	13	1	13	1	7	8	4
Ogle County	52	18	7	7	14	18	25	7	47	8

TUBERCULOSIS (ALL FORMS)—Concluded.

Fiscal year totals for State, counties and principal cities.	1917-1918		1918-1919		1919-1920		1920-1921		1921-1922	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Peoria County.....	1	209	32	220	373	169	114	113	387	72
Peoria.....	5	24	2	31	17	20	80	48	180	34
Perry County.....	9	11	9	9	18	14	4	12	5	11
Piatt County.....	3	33	8	21	28	33	15	11	35	9
Pike County.....	1	3	2	2	23	4	11	9	18	13
Pope County.....	1	32	2	36	19	34	4	22	1	12
Pulaski County.....	3	8	1	3	3	4	9	4	2	2
Putnam County.....	5	45	3	29	36	31	133	23	9	18
Randolph County.....	4	18	10	8	18	11	15	17	11	11
Richland County.....	15	119	22	114	181	78	186	78	232	70
Rock Island County.....							69	25	109	17
Moline.....							61	30	97	31
Rock Island.....	7	49	31	46	39	33	41	32	29	29
Saline County.....	43	127	198	126	391	114	34	139	195	67
Sangamon County.....							24	68	149	41
Springfield.....	1	5	7	5	12	5	13	5	3	4
Schuyler County.....	2	3	2	6	2	3	1	7	3	4
Scott County.....	2	22	2	30	9	17	29	19	21	18
Shelby County.....		2		3	4	3	1	3	3	3
Stark County.....	4	190	7	161	167	105	89	109	119	91
St. Clair County.....							5	22	4	20
Belleville.....							73	64	114	35
East St. Louis.....	52	30	5	28	15	27	27	20	40	12
Stephenson County.....							1	15	35	8
Freeport.....	27	31	17	26	18	28	20	17	38	21
Tazewell County.....	6	58	6	66	22	43	18	59	48	34
Union County.....	58	102	11	106	72	78	110	75	32	57
Vermilion County.....							70	31	18	50
Danville.....	11	10	3	11	3	13	10	9	6	2
Wabash County.....	1	18	19	19	1	12	13	9	9	9
Warren County.....	4	11	1	10	6	6	9	8	9	9
Washington County.....	8	31	28	12	20	9	22	11	5	5
Wayne County.....	5	26	42	14	28	14	18	9	18	18
White County.....	4	22	3	19	92	23	36	14	80	13
Whiteside County.....	11	91	12	92	57	81	14	92	87	70
Will County.....							7	30	55	24
Joliet.....	15	67	45	27	59	18	52	32	44	24
Williamson County.....							1	11	6	6
Herrin.....	27	94	13	73	27	72	54	61	150	47
Winnebago County.....							46	51	144	30
Rockford.....	7	15	12	6	8	3	6	6	22	2
Woodford County.....										
Total.....	13,417	8,402	16,195	7,820	18,286	6,741	13,265	5,594	15,494	4,682

PNEUMONIA: REPORTED MORBIDITY AND MORTALITY.

The State.....	6,297	8,277	22,718	13,626	18,268	8,078	8,976	4,948	13,032	4,103
Adams County.....		68	47	106	66	69	13	31	105	28
Quincy.....							6	19	61	18
Alexander County.....	1	39		36	48	37	3	14	14	22
Cairo.....								11	9	18
Bond County.....	4	15	15	12	45	6	4	13	4	6
Boone County.....		10		39	33	18	11	9	23	9
Brown County.....		9	2	14	6	12		9	6	5
Bureau County.....	8	50	8	58	97	34	55	31	70	16
Calhoun County.....		8	2	7	23	6	1	6		1
Carroll County.....	9	11		5	35	13	22	11	14	4
Cass County.....	2	15		12	36	11	8	17	10	2
Champaign County.....	6	45	6	82	45	38	25	39	117	20
Champaign.....							5	14	23	4
Urbana.....								3	6	2
Christian County.....	10	51	9	35	57	38	15	35	38	20
Clark County.....	2	18		16	5	27	1	17	20	9
Clay County.....		20	3	22	18	13	9	10	36	4
Clinton County.....	6	38		33	17	19	1	11	14	10

PNEUMONIA (ALL FORMS)—Continued.

Fiscal year totals for State, counties and principal cities.	1917-1918		1918-1919		1919-1920		1920-1921		1921-1922	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Coles County.....	3	31	14	37	85	35	24	28	60	11
Mattoon.....							8	15	53	5
Cook County.....	5,642	4,542	21,530	7,822	11,906	4,457	7,129	2,545	8,509	2,602
Beryon.....								1	11	11
Blue Island.....							10	13	21	18
Chicago.....							6,837	2,254	7,153	2,432
Chicago Heights.....							13	24	15	17
Cicero.....							28	26	109	16
Evanston.....							17	20	80	14
Forest Park.....							33		14	1
Maywood.....							19		43	9
Oak Park.....							95	30	121	11
Crawford County.....	3	25	4	15	66	21		23	6	7
Cumberland County.....	1	13	6	4	25	15	4	14	10	2
DeKalb County.....	2	27	40	34	56	22	2	17	54	9
DeWitt County.....	6	19	10	26	45	18	6	17	34	7
Douglas County.....	12	12	1	13	59	22	20	7	20	9
DuPage County.....	3	24	3	36	38	29	19	22	43	17
Edgar County.....	4	17	3	21	16	11	20	9	15	3
Edwardsville.....	1	6	1	9	41	4		3	19	2
Effingham County.....		22		23	13	24	7	13	21	5
Fayette County.....		20	1	21	26	30	3	18	11	9
Ford County.....	5	13		16	62	15	1	9	17	4
Franklin County.....	30	53	82	101	100	60	56	48	75	37
Fulton County.....	4	36	1	49	110	48	29	33	52	14
Canton.....									21	5
Gallatin County.....	2	7	5	16	69	13	9	4	20	4
Greene County.....	4	25		16	34	19	7	11	50	9
Grundy County.....	2	13	61	30	41	17	11	12	11	6
Hamilton County.....		18		6	33	19	14	19	27	5
Hancock County.....	1	21	7	20	124	19	9	11	26	12
Hardin County.....		7	1	7	3	4	4	4	11	2
Henderson County.....		6		4	14	4		7	1	4
Henry County.....	7	51	72	56	253	70	24	33	100	21
Keokuk.....							1	11	66	14
Iroquois County.....	3	29	8	50	56	17	8	18	41	12
Jackson County.....	1	36	33	37	183	30	16	24	20	6
Murphysboro.....							2		1	2
Jasper County.....	1	14		12	24	10	11	3	29	3
Jefferson County.....	2	31	10	19	65	43	23	28	47	19
Jersey County.....		8	2	10	8	7	4	5	9	4
JoDavies County.....	2	19		17	20	23	4	19	7	11
Johnson County.....		9		10	26	7	7	5	24	3
Kane County.....	17	128	63	171	293	135	86	79	238	57
Aurora.....							49	24	89	25
Elgin.....							16	31	34	20
Kankakee County.....	6	84	5	76	111	59	30	32	64	19
Kankakee.....							2	14	6	4
Kendall County.....		6	1	10	50	8	5	6	35	2
Knox County.....	4	49	5	56	80	76	48	29	102	32
Galesburg.....							39	18	67	17
Lake County.....	3	137	12	252	91	89	34	53	109	33
Waukegan.....							10	10	35	13
LaSalle County.....	24	104	16	173	133	82	85	79	159	54
LaSalle.....							39	16	41	6
Ottawa.....							4	11	47	8
Streator.....							8	24	8	9
Lawrence County.....	5	24		21	9	13	8	14	14	13
Lee County.....	5	19	1	21	27	21	10	13	31	4
Livingston County.....	7	24	22	56	110	38	25	22	57	12
Logan County.....	6	45	2	29	141	31	4	30	85	13
Lincoln.....								15	4	11
McDonough County.....	20	19	6	22	175	24	21	11	57	6
McHenry County.....	5	26	40	34	87	41	13	25	44	9
McLean County.....	30	43	4	72	102	62	27	45	42	23
Bloomington.....								24		16
Macon County.....	1	66	29	66	86	47		45	112	42
Decatur.....								37	84	32
Macoupin County.....	7	41	59	57	44	45	15	41	82	17
Madison County.....	1	125	14	194	173	127	48	70	204	55
Alton.....							17	16	78	14
Granite City.....							1	4	15	6

PNEUMONIA (ALL FORMS)—Concluded.

Fiscal year totals for State, counties and principal cities.	1917-1918		1918-1919		1919-1920		1920-1921		1921-1922	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Marion County.....		46	29	54	57	45	17	23	45	20
<i>Centralia</i>								6	4	6
Marshall County.....	3	9	14	9	68	12	9	9	10	8
Mason County.....		14	5	16	21	10	3	8	2	8
Massac County.....	2	17		29	20	19	44	9	1	5
Menard County.....		8	5	14	36	12	10	5	13	4
Mercer County.....		13	3	18	18	14	4	11	24	13
Monroe County.....	1	11		13	21	11	1	4	2	7
Montgomery County.....	4	38	5	51	69	36	10	27	27	42
Morgan County.....		78		66	91	91	30	56	57	28
<i>Jacksonville</i>							2	31		20
Moultrie County.....	2	19		13	11	13		10	9	5
Ogle County.....	7	26	7	26	62	30	47	19	21	15
Peoria County.....	2	154	27	181	104	150	9	96	60	48
<i>Peoria</i>							4	70	18	33
Perry County.....	2	21	27	12	27	12	6	9	26	6
Piatt County.....	11	9	1	12	24	13	7	6	17	4
Pike County.....	10	16	1	25	44	20	15	17	16	6
Pope County.....	2	2		5	15	1	2	3	3	2
Pulaski County.....	1	24		33	17	18	8	13		13
Putnam County.....		10		31	14	7		5	6	2
Randolph County.....	2	32		26	6	37	13	16	30	11
Richland County.....		12		6	28	12	4	5	22	3
Rock Island County.....		176	33	157	190	115	137	60	176	42
<i>Moline</i>							58	15	61	6
<i>Rock Island</i>							74	21	69	11
Saline County.....	14	48	127	26	79	27	22	39	31	18
Sangamon County.....	26	105	12	167	126	138	80	88	262	55
<i>Springfield</i>							44	60	208	40
Schuyler County.....		9		14	7	6	2	14	4	8
Scott County.....	1	5	1	12	11	7		5	4	1
Shelby County.....	3	22	6	26	32	31	3	19	38	15
Stark County.....		4		5	17	3		4	18	4
St. Clair.....	5	196	8	241	121	128	43	113	139	61
<i>Belleville</i>							3	22	6	
<i>East St. Louis</i>							21	67	87	35
Stephenson County.....		35	29	41	73	36	13	24	58	14
<i>Freeport</i>							9	19	45	9
Tazewell County.....	3	33	27	61	39	104	2	16	34	18
<i>Pekin</i>								6	15	3
Union County.....		20		42	61	33	3	19	68	8
Vermilion County.....	18	111	19	107	183	90	41	65	74	44
<i>Danville</i>							15	27	41	23
Wabash County.....	9	15		12	22	7		4	20	3
Warren County.....	9	7		15	11	28	10	13	14	8
Washington County.....	2	18	1	9	10	14	1	12	21	7
Wayne County.....	5	22	7	24	50	23	6	19	16	10
White County.....		16	2	30	36	28	15	19	8	6
Whiteside County.....	5	21		32	129	38	33	28	50	15
Will County.....	10	120		222	48	112	84	75	127	37
<i>Joliet</i>							41	51	68	19
Williamson County.....	12	71	1	51	68	68	14	35	75	27
<i>Herrin</i>							1		5	3
Winnebago County.....	184	148	30	1,342	277	118	40	66	106	41
<i>Rockford</i>							36	52	80	28
Woodford County.....	12	25	18	27	52	11	4	7	14	5
Total.....	6,297	8,277	22,718	13,626	18,268	8,078	8,976	4,948	13,032	4,103

INFLUENZA: REPORTED MORBIDITY AND MORTALITY.

The State.....			222,536	22,207	170,956	5,661	3,056	597	16,235	791
Adams County.....			2,580	211	1,163	59	9	5	108	5
<i>Quincy</i>								2	36	2
Alexander County.....			795	111	713	24	23	8	7	8
<i>Cairo</i>								6	1	3
Bond County.....			418	57	1,545	25		1	106	3

INFLUENZA—Continued.

Fiscal year totals for State, counties and principal cities.	1917-1918		1918-1919		1919-1920		1920-1921		1921-1922	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Boone County.....			466	51	591	23		3	25	2
Brown County.....			973	19	797	22		1	1	3
Bureau County.....			2, 631	148	2, 348	25	34	4	178	4
Calhoun County.....			763	23	1, 045	5	1	1	237	
Carroll County.....			479	42		5	16		38	3
Cass County.....			674	79	927	22	3	5	15	5
Champaign County.....			3, 314	231	2, 217	51	10	8	193	3
<i>Champaign.</i>								8	14	8
<i>Urbana.</i>								1	0	
Christian County.....			1, 768	167	1, 083	36	2	7	59	4
Clark County.....			559	68	286	18	1	1	23	1
Clay County.....			954	57	1, 590	24	15	1	132	3
Clinton County.....			687	63	1, 122	12	54	3	25	3
Coles County.....			2, 634	133	1, 070	18	7	2	94	9
<i>Mattoon.</i>								1	1	
Cook County.....			59, 136	9, 286	39, 035	2, 307	824	151	3, 384	284
<i>Berwyn.</i>									1	1
<i>Blue Island.</i>									4	
<i>Chicago.</i>							774	124	2, 585	269
<i>Chicago Heights.</i>								3	2	3
<i>Cicero.</i>							4		39	6
<i>Evanston.</i>							8	1	11	
<i>Forest Park.</i>									19	1
<i>Maywood.</i>									3	
<i>Oak Park.</i>							5	8	30	
Crawford County.....			1, 427	76	467	22		4	53	1
Cumberland County.....			198	40	684	13	19	1	9	2
DeKalb County.....			1, 236	115	1, 291	25	9	3	46	1
DeWitt County.....			1, 350	77	1, 063	14	21	3	145	2
Douglas County.....			968	68	731	18		2	136	
DuPage County.....			720	83	852	22		8	65	4
Edgar County.....			844	83	752	11	122	3	133	9
Edwards County.....			949	21	676	14	2	1	74	2
Effingham County.....			1, 120	83	637	17	9		33	3
Fayette County.....			1, 874	82	749	30		4	138	2
Ford County.....			618	67	1, 590	24	1		25	1
Franklin County.....			2, 284	244	2, 049	81	57	7	386	12
Fulton County.....			2, 022	244	2, 812	74	103	22	202	4
<i>Canton.</i>								10	9	8
Gallatin County.....			506	53	841	9	5		104	
Greene County.....			758	84	1, 181	23	6	3	105	1
Grundy County.....			1, 415	101	729	18	25	6	28	1
Hamilton County.....			475	37	1, 256	22		3	72	2
Hancock County.....			1, 286	93	3, 107	27	17	9	180	
Hardin County.....			263	53	99	1				
Henderson County.....			294	22	342	11			32	2
Henry County.....			2, 011	120	7, 984	74	45	8	95	4
<i>Kewanee.</i>								2	1	2
Iroquois County.....			1, 164	111	1, 443	29	17	3	87	5
Jackson County.....			1, 344	140	1, 569	67	44	5	168	10
<i>Murphysboro.</i>									41	1
Jasper County.....			806	43	1, 154	24	1		117	2
Jefferson County.....			1, 142	70	1, 992	42	17	3	79	4
Jersey County.....			774	28	154	11	8	3	18	1
JoDavies County.....			1, 110	43	509	17		2	32	2
Johnson County.....			77	56	569	10	33		330	5
Kane County.....			4, 321	335	2, 336	63	3	16	110	13
<i>Aurora.</i>							1	5	20	6
<i>Elgin.</i>								5	4	3
Kankakee County.....			1, 449	183	1, 089	18	112	4	320	5
<i>Kankakee.</i>								1		
Kendall County.....			292	27	613	12	5	1	9	2
Knox County.....			1, 987	140	1, 466	38	84	3	101	12
<i>Galesburg.</i>							1	2	5	6
Lake County.....			3, 145	1, 085	1, 803	118	1	11	90	7
<i>Waukegan.</i>							1	2	4	
LaSalle County.....			5, 681	400	4, 041	116	24	5	174	6
<i>LaSalle.</i>							5		12	
<i>Ottawa.</i>										1
<i>Streator.</i>								2	1	1
Lawrence County.....			137	61	579	18	26	1	27	11
Lee County.....			441	64	866	28	3	2	90	7

INFLUENZA—Concluded.

Fiscal year totals for State, counties and principal cities.	1917-1918		1918-1919		1919-1920		1920-1921		1921-1922	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Livingston County.....			3,454	121	2,590	36	8	3	17	6
Logan County.....			1,015	110	2,361	78	32	7	325	11
Lincoln.....								3		4
McDonough County.....			1,917	73	2,131	24	39	5	339	6
McHenry County.....			1,569	70	1,600	25	152	4	76	6
McLean County.....			3,432	193	2,717	79	30	5	399	16
Bloomington.....								2	30	13
Macon County.....			2,634	188	1,990	71	3	8	278	10
Decatur.....								6	66	8
Macoupin County.....			4,954	186	1,781	34	32	12	89	7
Madison County.....			4,105	399	3,229	79	10	15	298	10
Alton.....								2	178	6
Granite City.....								1		2
Marion County.....			1,915	133	1,464	28	46	8	85	5
Centralia.....								1	2	1
Marshall County.....			920	37	730	13	127	1	31	2
Mason County.....			1,546	50	1,296	17	12	1	17	2
Massac.....			434	91	186	4	12		348	3
Menard County.....			1,303	51	1,415	13	65	1	214	2
Merced County.....			639	55	1,454	23	40	1	120	3
Monroe County.....			416	25	358	4		1	23	
Montgomery County.....			1,893	111	1,410	60		7	58	8
Morgan County.....			2,949	135	2,175	49	20	1	118	4
Jacksonville.....								1		
Moultrie County.....			303	46	895	15	8		18	1
Ogle County.....			1,008	40	1,297	24	10	5	19	6
Peoria County.....			10,442	491	1,647	103	29	20	127	11
Peoria.....								14	2	4
Perry County.....			1,426	107	252	32	22	5	23	2
Piatt County.....			1,754	45	737	12		2	248	
Pike County.....			1,261	66	2,506	25	1	1	150	5
Pope County.....			4	18	322	3	4	1	11	1
Pulaski County.....			380	62	306	20	24	1	4	1
Putnam County.....			132	19	198	6		1	23	1
Randolph County.....			1,921	114	241	23			370	1
Richland County.....			490	29	1,245	18	1		16	1
Rock Island County.....			4,502	391	1,295	49	13	4	258	17
Moline.....							2		70	1
Rock Island.....							3	3	16	6
Saline County.....			3,113	135	710	65	21	12	256	8
Sangamon County.....			5,517	410	1,312	76	24	16	474	22
Springfield.....							1	9	29	14
Schuyler County.....			74	43	830	12	10	1	1	2
Scott County.....			353	19	129	5		2	51	1
Shelby County.....			1,040	75	1,170	34	2	1	56	8
Stark County.....			216	17	535	11	86	4	142	2
St. Clair County.....			7,519	595	1,901	69	23	12	212	20
Belleville.....								2	14	5
East St. Louis.....							16	5	81	8
Stephenson County.....			1,391	98	665	54	18	3	57	8
Freeport.....								1	11	5
Tazewell County.....			2,674	135	1,663	31	104	5	522	10
Pekin.....							1	4	222	4
Union County.....			885	120	1,147	22	3	2	833	9
Vermilion County.....			3,535	403	3,203	67	21	13	212	13
Danville.....							3	6	14	6
Wabash County.....			385	56	326	10	9	1	195	3
Warren County.....			1,808	54	574	27		1	171	3
Washington County.....			1,219	40	397	7	5	3	23	
Wayne County.....			585	90	1,150	26	1	5	45	10
White County.....			769	63	1,903	30		5	38	
Whiteside County.....			2,274	113	1,829	45	13	6	60	
Will County.....			1,287	378	1,040	60	53	22	87	20
Joliet.....							3	9		8
Williamson County.....			844	160	1,461	103	6	14	136	11
Herrin.....									2	
Winnebago County.....			1,506	300	2,427	96	39	6	118	3
Rockford.....							4	5	27	5
Woodford County.....			1,735	72	1,199	10	25	1	9	3
Total.....			222,536	22,207	170,956	5,661	3,056	597	16,235	791

SYPHILIS: REPORTED MORBIDITY AND MORTALITY.

Fiscal year totals for State, counties and principal cities.	1917-1918		1918-1919		1919-1920		1920-1921		1921-1922	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
The State.....			3,256	475	13,222	463	7,277	419	8,763	421
Adams County.....			15	4	192	4	19	3	185	5
Quincy.....							3		178	3
Alexander County.....			2	4	23	9	130	3	145	7
Carro.....							2		145	6
Bond County.....					6		2	1	4	
Boone County.....			2	2					1	
Brown County.....			2		10		1		6	
Bureau County.....			1	4	33	1	7		18	1
Calhoun County.....					1					
Carroll County.....					2	1	3	1		2
Cass County.....			5		24	2		1	11	
Champaign County.....			7	3	210	2	52	5	82	2
Champaign.....							1		60	1
Urbana.....							2		11	
Christian County.....			1	2	27		15	2	23	2
Clark County.....				2		2			4	
Clay County.....					16		7	1	14	
Clinton County.....				2	12	3	3	1	2	
Coles County.....				2	100	1	38	4	58	
Mattoon.....							4		39	
Cook County.....			2,638	237	6,213	244	4,253	218	4,555	222
Berwyn.....										1
Blue Island.....										
Chicago.....								188	4,460	208
Chicago Heights.....									28	1
Cicero.....								1	15	
Evanston.....									4	1
Forest Park.....										
Maywood.....									2	
Oak Park.....								2		1
Crawford County.....				2	11		6		8	1
Cumberland County.....			1	1		2	1			2
DeKalb County.....			3	1	2		7	1	6	1
DeWitt County.....				2	8	1		1	11	1
Douglas County.....			1	1	2	1	3		2	
DuPage County.....			2	1	3	1	7		1	1
Edgar County.....				5	4		8		3	3
Edwards County.....					2					
Effingham County.....				1	2	2	4	6	3	1
Fayette County.....					6		3		2	1
Ford County.....				1	1	1		1	3	
Franklin County.....				1	116	2	40	7	56	2
Fulton County.....			2	1	15	3	20	3	6	3
Canton.....									2	1
Gallatin County.....									1	
Greene County.....				2	13	1	11		6	1
Grundy County.....				1	3		1	1	5	
Hamilton County.....										
Hancock County.....			5	1	18		8		5	
Hardin County.....										
Henderson County.....					5				1	
Henry County.....			2	3	11	2	16		15	1
Kewanee.....									12	1
Iroquois County.....				3	26		3	2	4	1
Jackson County.....				3	62	5	34	7	32	1
Murphysboro.....									22	
Jasper County.....							1		1	1
Jefferson County.....			1	1	33	2	1		14	3
Jersey County.....			1		4		5	1		
JoDavies County.....				1	6	1	3		3	2
Johnson County.....					3		4		1	
Kane County.....			16	8	220	6	117	4	332	4
Aurora.....									56	
Elgin.....									139	3
Kankakee County.....				2	18		3	1	13	2
Kankakee.....									8	
Kendall County.....				1			5		1	
Knox County.....			33	4	103	3	35	7	71	5
Galesburg.....									64	3

SYPHILIS—Continued.

Fiscal year totals for State, counties and principal cities.	1917-1918		1918-1919		1919-1920		1920-1921		1921-1922	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Lake County.....			9		37	7	15	4	33	9
Waukegan.....									26	1
LaSalle County.....				3	182	4	45	2	42	2
LaSalle.....									80	
Ottawa.....									2	1
Streator.....									12	1
Lawrence County.....					3		11	1	3	
Lee County.....				1	18				12	
Livingston County.....			2	2	144	2	25	1	79	
Logan County.....			1	1	44	2	76	2	44	3
Lincoln.....									58	
McDonough County.....				3		6	6	4	8	3
McHenry County.....			1	1	7		8	1	3	
McLean County.....			13	1	189	5	25	2	55	1
Bloomington.....									48	
Macon County.....			12	4	541	6	214	10	265	10
Decatur.....									262	8
Macoupin County.....			16	3	208	1	14	2	31	2
Madison County.....			16	8	353	2	157	9	199	7
Alton.....									116	
Granite City.....									26	
Marion County.....				1	5	3	6	1	7	3
Centralia.....									5	
Marshall County.....			2		9				2	
Mason County.....				1	4		14		14	2
Massac County.....					8	2		2	10	
Menard County.....					12	1	2	1	2	
Mercer County.....					5		2		4	
Monroe County.....										
Montgomery County.....					56	3	55	4	54	
Morgan County.....			10	5	126	3	95	10	106	8
Jacksonville.....									103	6
Moultrie County.....					4		8		2	
Ogle County.....				1	15	1			2	1
Peoria County.....			133	13	251	20	224	16	474	13
Peoria.....									356	12
Perry County.....				1	22		3	3	17	
Piatt County.....				38			3		3	1
Pike County.....				1	3	1	5		3	
Pope County.....					14	1	3	1	3	
Pulaski County.....				3		3			2	4
Putnam County.....					6	1	3		1	
Randolph County.....			2	1	661	1	5	1	56	1
Richland County.....					9		3	1	17	1
Rock Island County.....			59	7	203	9	287	7	197	11
Moline.....								1	73	6
Rock Island.....									121	
Saline County.....			3	1	5	4	29	1	35	1
Sangamon County.....			61	19	687	16	257	10	432	11
Springfield.....								4	424	9
Schuyler County.....					1				4	1
Scott County.....					11		2			
Shelby County.....			2	1	5	1	9		1	1
Stark County.....							3		2	
St. Clair County.....			128	11	1,222	11	302	15	339	15
Belleville.....									35	2
East St. Louis.....								2	294	9
Stephenson County.....			11	3	145	6	29	2	84	3
Freeport.....									83	2
Tazewell County.....			7	1	31	5	36		12	4
Pekin.....									10	3
Union County.....					3	2	22	7	9	2
Vermilion County.....			3	9	80	12	133	2	142	11
Danville.....								1	133	10
Wabash County.....									5	
Warren County.....				3	1	2	27		24	
Washington County.....								1	2	
Wayne County.....			1	1	3				2	
White County.....							4		3	
Whiteside County.....			3	1	21	2	9		20	1
Will County.....				1	7	7	56	1	11	3
Joliet.....									10	

SYPHILIS—Concluded.

Fiscal year totals for State, counties and principal cities.	1917-1918		1918-1919		1919-1920		1920-1921		1921-1922	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Williamson County.....			3	4	24	3	12	1	54	1
<i>Herrin</i>									56	1
Winnebago County.....			19	13	269	4	101	12	99	6
<i>Rockford</i>									98	6
Woodford County.....			1		2	1	4		13	
Total.....			3,256	475	13,222	463	7,277	419	8,763	421

GONOCOCCUS INFECTION: REPORTED MORBIDITY AND MORTALITY.

The State.....	7,040	26	17,670	58	13,828	41	12,252	38
Adams County.....	79	3	286	1	40	1	215	1
<i>Quincy</i>						1	214	1
Alexander County.....			4	6	20	3	26	1
<i>Cairo</i>						3	26	1
Bond County.....	4		12		15		6	1
Boone County.....						1		
Brown County.....	1				1		1	
Bureau County.....			19		8		27	
Calhoun County.....								
Carroll County.....	8		6		1		1	
Cass County.....	2		27	1	5		1	
Champaign County.....	46		417	1	131		64	
<i>Champaign</i>							31	
<i>Urbana</i>							7	
Christian County.....	2		25		54		9	
Clark County.....	1				6		2	
Clay County.....	2		34		17		15	
Clinton County.....			4		13		2	
Coles County.....	2		88		114		66	1
<i>Mattoon</i>							38	
Cook County.....	4,761	11	10,543	18	7,385	12	8,252	9
<i>Berwyn</i>								
<i>Blue Island</i>						1		
<i>Chicago</i>						9	8,178	8
<i>Chicago Heights</i>							10	
<i>Cicero</i>							8	
<i>Evanston</i>						1		1
<i>Forest Park</i>							1	
<i>Maywood</i>							2	
<i>Oak Park</i>						1		
Crawford County.....			1		6		12	
Cumberland County.....	5		5	1	10		2	
DeKalb County.....	6		7		8		7	
DeWitt County.....			9		16	1	4	
Douglas County.....			4	1			4	
DuPage County.....			2		16		1	
Edgar County.....			9		12		5	
Edwards County.....					4		1	
Effingham County.....			10		6		18	
Fayette County.....	1		6		5			
Ford County.....			8				5	
Franklin County.....	3		84	1	73		24	
Fulton County.....	7		33		55		13	
<i>Canton</i>							6	
Gallatin County.....	4							1
Greene County.....			17		23		23	
Grundy County.....					1			
Hamilton County.....			2		8		2	
Hancock County.....	10		12		19		6	
Hardin County.....				1				
Henderson County.....								
Henry County.....	14		21		44	1	27	
<i>Kewanee</i>							11	
Iroquois County.....			13		14	1	18	
Jackson County.....	1		34		27		3	2
<i>Murphysboro</i>							1	

GONOCOCCUS INFECTION—Continued.

Fiscal year totals for State, counties and principal cities.	1917-1918		1918-1919		1919-1920		1920-1921		1921-1922	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Jasper County.....					6		2		1	
Jefferson County.....			1		10		4		4	
Jersey County.....			9		9		26		11	
Jo Daviess County.....					2		4		3	
Johnson County.....			3		3		2			
Kane County.....			33		321	2	357		240	1
<i>Aurora</i>									19	
<i>Elgin</i>									34	
Kankakee County.....					7	1	3		5	
<i>Kankakee</i>									1	
Kendall County.....							6		8	
Knox County.....			32		111	1	51		66	4
<i>Galesburg</i>									67	4
Lake County.....			26	1	75		75		19	
<i>Waukegan</i>									10	
LaSalle County.....			19	1	176		132		28	
<i>LaSalle</i>									6	
<i>Ottawa</i>									1	
<i>Streator</i>									8	
Lawrence County.....				1	3		16		1	
Lee County.....					6		4		2	
Livingston County.....					72		36		44	
Logan County.....			3		25		9		2	
<i>Lincoln</i>									2	
McDonough County.....			5		6		4		3	1
McHenry County.....			11		36		15		2	
McLean County.....			45		99	3	205		42	
<i>Bloomington</i>									38	
Macon County.....			93		521	2	314	1	267	2
<i>Decatur</i>								1	280	2
Macoupin County.....			12		130		95		30	
Madison County.....			29	1	533	1	499		270	
<i>Alton</i>									211	
<i>Granite City</i>									4	
Marion County.....			7		4		15	1	4	1
<i>Centralia</i>										1
Marshall County.....			5		3		3		1	
Mason County.....			2	1	14		36		22	
Massac County.....										1
Menard County.....					42		17		6	
Mercer County.....					3		6		2	
Monroe County.....							1		1	
Montgomery County.....			4		40	1	47	1	94	
Morgan County.....			23		71	1	42	1	61	2
<i>Jacksonville</i>								1	38	
Moultrie County.....					5		19		12	
Ogle County.....			1		15		4			
Peoria County.....			259	1	363	3	370	2	470	4
<i>Peoria</i>								2	430	4
Perry County.....			1		8		12		18	
Piatt County.....			3		1		5		5	
Pike County.....			2		32		15		16	1
Pope County.....					22		4			
Pulaski County.....						1	4			
Putnam County.....							4		2	
Randolph County.....			2		34		8		83	
Richland County.....							3	1	5	1
Rock Island County.....			239		427	1	957	1	327	
<i>Moline</i>								1	168	
<i>Rock Island</i>									167	
Saline County.....			5		190		154	1	52	
Sangamon County.....			95	3	456	1	280	4	364	1
<i>Springfield</i>								4	354	1
Schuyler County.....			1		1			1		
Scott County.....			1		6					
Shelby County.....			1		3		9		6	
Stark County.....					2					
St. Clair County.....			718	1	1,241	2	470	2	299	1
<i>Bellefonte</i>									35	
<i>East St. Louis</i>								2	251	1
Stephenson County.....			15		270		82		76	1
<i>Freeport</i>									79	1

GONOCOCCUS INFECTION—Concluded.

Fiscal year totals for State, counties and principal cities.	1917-1918		1918-1919		1919-1920		1920-1921		1921-1922	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Tazewell County.....			25		113		59		33	
<i>Pekin</i>							11		19	
Union County.....					4				22	
Vermilion County.....			216		100	5	210	1	142	1
<i>Danville</i>							1		123	1
Wabash County.....					16		27		21	
Warren County.....					8		2		4	
Washington County.....					8		5		4	
Wayne County.....			1		9		5		4	
White County.....			1		19		3		1	
Whiteside County.....			1		31		279	2	38	
Will County.....			1	1					29	
<i>Joliet</i>									25	
Williamson County.....			1		40		29	1	2	
<i>Herrin</i>									121	
Winnebago County.....			133		183	2	406	1	117	
<i>Rockford</i>									2	
Woodford County.....			1	1	6		2			
Total.....			7,040	26	17,670	58	13,828	41	12,252	38

ANTERIOR POLIOMYELITIS: REPORTED MORBIDITY AND MORTALITY.

The State.....	881	344	256	121	364	101	303	66	653	145
Adams County.....	2	2		2	1	2	2		1	
<i>Quincy</i>									1	
Alexander County.....							1			
<i>Carro</i>										
Bond County.....			1	1			2	1	9	1
Boone County.....			1		3	1		1		1
Brown County.....		1			1	1				
Bureau County.....	5	1	3	3	11	4			11	2
Calhoun County.....									2	
Carroll County.....		1		1					3	
Cass County.....	1			2			4	3	8	
Champaign County.....	2	1	2	6	6	1	2	1	7	1
<i>Champaign</i>								1	2	
<i>Urbana</i>										
Christian County.....	3	1				1	4	1	3	2
Clark County.....	1				1	1			1	
Clay County.....	1	1				1	3	2	1	
Clinton County.....			1				2		2	
Coles County.....	3	3	1		12		1		15	1
<i>Mattoon</i>									6	
Cook County.....	702	216	111	25	118	21	159	11	167	40
<i>Berwyn</i>										
<i>Blue Island</i>									3	1
<i>Chicago</i>								8	194	33
<i>Chicago Heights</i>									2	1
<i>Cicero</i>								1	1	
<i>Evanston</i>								2	5	1
<i>Forest Park</i>										
<i>Maywood</i>									2	1
<i>Oak Park</i>									9	2
Crawford County.....							1			
Cumberland County.....				1	2				6	1
DeKalb County.....	11	7	25	12	2	2			2	
DeWitt County.....	2	1		1	1		2		4	
Douglas County.....	2	1		1	2		3		4	1
DuPage County.....	7	3	2	2	4	1	2	1	1	2
Edgar County.....	1			1		1	1	1		
Edwards County.....						1				1
Effingham County.....					3	2			2	1
Fayette County.....						3			3	
Ford County.....	1	2	3	2	1				3	1
Franklin County.....	1				2	1	1	1	1	2

ANTERIOR POLIOMYELITIS—Continued.

Fiscal year totals for State, counties and principal cities.	1917-1918		1918-1919		1919-1920		1920-1921		1921-1922	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Fulton County.....	2	—	—	—	10	2	—	—	3	3
Canton.....	—	—	—	—	—	—	1	1	—	—
Gallatin County.....	1	2	—	1	4	1	1	1	2	—
Greene County.....	1	3	1	—	—	—	1	1	3	—
Grundy County.....	1	—	—	—	—	1	—	—	—	1
Hamilton County.....	5	—	1	2	1	—	1	—	3	—
Hancock County.....	—	—	—	—	—	—	—	—	—	—
Hardin County.....	1	1	—	—	—	—	—	—	—	—
Henderson County.....	6	6	—	2	3	—	2	1	5	1
Henry County.....	—	—	—	—	—	—	—	—	—	—
Kewanee.....	—	—	—	—	—	—	—	—	—	—
Iroquois County.....	2	1	3	2	3	—	2	—	3	1
Jackson County.....	—	—	—	—	2	2	5	—	2	1
Murphysboro.....	—	—	—	—	—	—	—	—	1	1
Jasper County.....	—	—	—	—	—	—	3	—	—	—
Jefferson County.....	—	1	—	1	—	1	1	2	—	—
Jersey County.....	—	—	—	—	—	—	—	—	—	—
JoDaviess County.....	3	—	7	2	4	—	1	—	1	—
Johnson County.....	—	—	—	—	—	—	—	—	—	—
Kane County.....	6	3	14	7	2	1	6	—	13	2
Aurora.....	—	—	—	—	—	—	—	—	—	—
Elgin.....	—	—	—	—	—	—	—	—	—	—
Kankakee.....	8	6	20	4	3	1	3	—	2	1
Kankakee.....	—	—	—	—	—	—	—	—	—	—
Kendall County.....	—	1	—	—	—	—	1	—	—	—
Knox County.....	2	2	1	—	7	1	6	—	2	—
Galesburg.....	—	—	—	—	—	—	—	—	—	—
Lake County.....	3	6	3	—	9	2	11	4	14	2
Waukegan.....	—	—	—	—	—	—	—	—	—	—
LaSalle County.....	6	1	2	1	19	—	8	2	43	5
LaSalle.....	—	—	—	—	—	—	—	—	—	—
Ottawa.....	—	—	—	—	—	—	—	—	—	—
Streator.....	—	—	—	—	—	—	—	—	—	—
Lawrence County.....	—	—	—	—	—	—	1	—	—	—
Lee County.....	1	—	—	1	—	1	—	—	5	1
Livingston County.....	3	1	—	—	—	2	3	1	15	1
Logan County.....	2	1	—	1	1	1	1	—	11	3
Lincoln.....	—	—	—	—	—	—	—	—	—	—
McDonough County.....	—	1	—	1	5	—	—	—	3	—
McHenry County.....	7	3	3	1	4	—	3	1	4	—
McLean County.....	4	4	1	—	2	1	5	1	11	2
Bloomington.....	—	—	—	—	—	—	—	—	—	—
Macon County.....	2	3	1	—	3	—	1	—	15	4
Decatur.....	—	—	—	—	—	—	—	—	—	—
Macoupin County.....	4	1	3	2	10	3	1	1	17	5
Madison County.....	6	3	2	—	3	1	10	3	17	4
Alton.....	—	—	—	—	—	—	—	—	—	—
Granite City.....	—	—	—	—	—	—	—	—	—	—
Marion County.....	—	—	—	—	—	2	—	—	2	1
Centralia.....	—	—	—	—	—	—	—	—	—	—
Marshall County.....	—	—	—	1	3	1	—	—	6	1
Mason County.....	1	—	—	—	—	1	—	—	—	—
Massac County.....	—	—	—	—	—	—	—	—	5	—
Menard County.....	—	1	—	—	—	—	1	—	4	—
Mercer County.....	8	—	1	—	1	2	2	—	5	2
Monroe County.....	—	—	1	1	—	—	—	—	1	—
Montgomery County.....	—	—	3	1	—	1	1	—	7	3
Morgan County.....	—	3	1	1	2	—	1	—	16	3
Jacksonville.....	—	—	—	—	—	—	—	—	5	1
Moultrie County.....	1	2	—	—	1	—	—	—	2	—
Ogle County.....	—	1	—	—	4	—	—	—	11	3
Peoria County.....	—	4	—	2	—	3	2	3	10	5
Peoria.....	—	—	—	—	—	—	—	—	8	5
Perry County.....	—	—	1	—	—	—	—	—	—	—
Piatt County.....	—	1	—	—	13	—	1	—	3	1
Pike County.....	—	1	—	—	—	—	1	—	—	—
Pope County.....	—	—	—	—	—	—	—	—	—	—
Pulaski County.....	1	1	—	1	2	1	—	2	—	—
Putnam County.....	—	—	5	1	8	1	—	—	—	—
Randolph County.....	1	—	—	—	—	—	—	2	—	1
Richland County.....	—	—	—	1	—	—	—	—	1	—

ANTERIOR POLIOMYELITIS—Concluded.

Fiscal year totals for State, counties and principal cities.	1917-1918		1918-1919		1919-1920		1920-1921		1921-1922	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Rock Island County.....	18	15	3	4	4	3	3	1	9	2
Moline.....									1	
Rock Island.....							1	1	3	1
Saline County.....	1		1		1	2	1			
Sangamon County.....	3	3	6	2	4	3	8	4	32	10
Springfield.....								3	16	4
Schuyler County.....	1				1	1			2	
Scott County.....			1						2	1
Shelby County.....					2				3	1
Stark County.....					3				7	
St. Clair County.....	1	7	9	2	7	3	8	3	7	1
Belleville.....										
East St. Louis.....								3	5	1
Stephenson County.....	3	3	2	1	5			2	4	
Freeport.....								2		
Tazewell County.....	1				5	3			9	1
Pekin.....									4	1
Union County.....						1	2	1		
Vermilion County.....	9	2	1	1	3		1		4	
Danville.....									1	
Wabash County.....									5	4
Warren County.....		1	1	1	17				3	
Washington County.....	1	1					2			
Wayne County.....			1				1			
White County.....		1				1			1	
Whiteside County.....	2		1	5	3	4	2	1	20	4
Will County.....	2	2	5				1	1	10	3
Joliet.....									7	3
Williamson County.....	5	3			2	2	2	2	1	1
Herrin.....										1
Winnebago County.....		1	2	3	6	1	1	1	3	2
Rockford.....								1	2	1
Woodford County.....	1			1	2				4	
Total.....	881	344	256	121	364	101	303	66	653	145

SHOWING THE REPORTS OF SEVENTEEN PRINCIPAL COMMUNICABLE DISEASES FOR THE ENTIRE STATE OF ILLINOIS BY MONTHS FOR THE YEARS JULY 1, 1920, TO JUNE 30, 1921, AND JULY 1, 1921, TO JUNE 30, 1922.

Diseases.	July.		August.		September.		October.		November.		December.		January.	
	1920-21	1921-22	1920-21	1921-22	1920-21	1921-22	1920-21	1921-22	1920-21	1921-22	1920-21	1921-22	1920-21	1921-22
Typhoid fever.....	162	336	211	449	284	422	257	386	198	180	109	80	96	79
Malaria.....	171	256	279	149	117	128	132	66	87	63	123	37	80	50
Smallpox.....	383	102	212	29	198	23	326	39	553	120	1,294	261	1,900	373
Measles.....	1,573	533	542	128	223	89	510	164	1,280	269	1,985	567	3,932	918
Scarlet fever.....	429	332	293	412	715	857	1,385	1,569	1,972	1,777	2,637	1,744	3,116	1,967
Whooping cough.....	1,650	1,928	1,214	912	929	606	957	351	1,056	378	1,290	336	1,530	412
Diphtheria.....	1,624	744	454	848	904	1,613	1,907	3,658	2,700	3,493	2,343	2,579	1,874	1,918
Influenza.....	55	64	124	112	163	1,613	217	3,239	283	192	2,520	199	1,874	1,337
Poliomyelitis.....	9	118	35	140	80	207	66	114	42	25	18	14	4	8
Meningitis, epidemic.....	7	19	12	13	15	16	16	22	20	24	9	18	20	19
Rabies.....	1	1	1	1	1	1	1	1	1	1	3	-----	4	1
Tuberculosis (all forms).....	1,065	1,505	729	1,002	1,205	1,239	1,012	1,125	938	1,148	1,114	1,238	989	1,153
Syphilis.....	743	649	449	367	681	551	568	650	520	702	584	891	655	506
Gonorrhea.....	1,365	970	1,066	771	1,301	1,391	1,550	1,194	1,397	1,174	1,230	981	1,087	906
Pneumonia.....	1,282	317	215	305	266	334	335	1,609	1,604	1,538	980	825	1,568	1,250
Septic sore throat.....	74	37	94	44	91	45	153	94	235	115	206	106	178	103
Chancroid.....	77	34	96	33	63	32	70	33	88	33	65	29	104	48

SHOWING THE REPORTS OF SEVENTEEN PRINCIPAL COMMUNICABLE DISEASES FOR THE ENTIRE STATE OF ILLINOIS BY MONTHS—Concluded.

Diseases.	February.		March.		April.		May.		June.		Total.	
	1920-21		1921-22		1920-21		1921-22		1920-21		1921-22	
	1920-21	1921-22	1920-21	1921-22	1920-21	1921-22	1920-21	1921-22	1920-21	1921-22	1920-21	1921-22
Typhoid fever.....	74	73	83	71	89	74	72	135	152	116	1,787	2,401
Malaria.....	44	110	82	22	44	30	68	60	138	54	1,325	1,025
Smallpox.....	1,650	359	1,760	227	1,204	197	1,027	238	412	115	10,928	2,083
Measles.....	4,827	1,340	5,911	2,167	5,894	2,658	4,854	3,285	2,435	2,744	33,676	14,882
Scarlet fever.....	2,525	1,817	2,241	1,390	2,113	946	1,629	671	2,710	465	19,765	13,947
Whooping cough.....	1,327	1,442	1,482	1,551	1,440	610	1,466	657	1,821	1,553	16,185	8,336
Diphtheria.....	1,364	1,361	1,350	1,211	1,215	863	1,085	820	1,944	1,793	16,784	19,901
Indiuenza.....	424	7,615	1,293	5,780	309	465	125	114	27	6	3,056	16,235
Poliomyelitis.....	7	4	25	9	3	2	5	6	27	15	303	236
Meningitis epidemic.....	25	22	7	28	11	27	18	15	15	15	193	10
Rabies.....	2	2	2	2	1	1	1	1	1	1	9	9
Tuberculosis (all forms).....	1,103	1,111	1,366	1,685	1,253	1,229	1,208	1,640	1,283	1,417	13,265	15,494
Syphilis.....	551	574	608	1,112	662	759	648	1,023	608	979	7,277	8,763
Gonorrhea.....	1,021	849	1,100	912	889	889	938	861	861	1,081	13,828	12,252
Pneumonia.....	1,222	2,629	1,345	2,942	992	1,622	738	1,113	429	1,548	8,976	13,032
Septic sore throat.....	148	163	164	94	107	76	77	29	31	22	1,558	13,927
Chancroid.....	51	35	66	35	55	28	34	31	25	29	1,789	400

SHOWING THE REPORTS OF SEVENTEEN PRINCIPAL COMMUNICABLE DISEASES FOR THE CITY OF CHICAGO, ILLINOIS, BY MONTHS FOR THE YEARS JULY 1, 1920, TO JUNE 30, 1921, AND JULY 1, 1921, TO JUNE 30, 1922.

Diseases.	July.		August.		September.		October.		November.		December.		January.	
	1920-21		1920-21		1920-21		1920-21		1920-21		1920-21		1920-21	
	1920-21	1921-22	1920-21	1921-22	1920-21	1921-22	1920-21	1921-22	1920-21	1921-22	1920-21	1921-22	1920-21	1921-22
Typhoid fever.....	14	14	11	36	47	27	41	44	23	27	22	16	18	15
Malaria.....	5	2	6	1	1	6	2	2	15	1	1	1	71	36
Smallpox.....	447	273	69	46	73	34	148	74	263	85	508	175	738	507
Scarlet fever.....	179	104	87	137	240	237	503	413	622	583	793	497	319	558
Whooping cough.....	392	682	266	445	260	279	199	100	170	37	292	82	318	138
Diphtheria.....	386	448	230	420	453	544	937	1,138	1,313	1,144	1,176	883	1,028	846
Influenza.....	4	6	7	18	44	7	74	62	89	87	90	64	94	96
Poliomyelitis.....	1	17	19	25	21	44	18	27	9	8	2	4	9	7
Meningitis, epidemic.....	4	5	1	3	5	7	10	5	7	8	4	5	9	7
Rabies.....														
Tuberculosis (all forms).....	865	891	490	754	714	864	825	789	683	887	915	924	832	890
Syphilis.....	312	338	240	176	432	372	256	460	286	485	302	636	403	307
Gonorrhea.....	770	604	453	411	780	970	602	801	661	737	69	612	588	614
Pneumonia.....	231	250	172	80	237	78	272	160	466	258	696	305	1,161	348
Septic sore throat.....	2	5	1	2	4	2	4	12	13	13	16	14	12	11
Chancroid.....	32	23	23	23	37	18	31	16	38	16	36	20	38	21

SHOWING THE REPORTS OF SEVENTEEN PRINCIPAL COMMUNICABLE DISEASES FOR THE CITY OF CHICAGO, ILLINOIS, BY MONTHS—Concluded.

Diseases.	February.		March.		April.		May.		June.		Total.	
	1920-21		1920-21		1920-21		1920-21		1920-21		1920-21	
	1920-21	1921-22	1920-21	1921-22	1920-21	1921-22	1920-21	1921-22	1920-21	1921-22	1920-21	1921-22
Typhoid fever.....	12	10	15	19	10	6	4	10	11	9	234	233
Malaria.....	67	15	2	19	13	12	13	2	3	1	11	22
Smallpox.....	1,100	780	1,670	1,546	1,778	1,964	1,652	2,484	1,056	2,120	293	119
Measles.....	369	577	621	490	573	338	490	286	312	224	9,602	10,090
Scarlet fever.....	817	160	389	202	389	187	422	195	579	354	5,915	4,422
Whooping cough.....	75	639	895	656	746	455	661	478	620	474	4,007	2,896
Diphtheria.....	1	1,831	58	730	157	138	70	48	12	16	9,252	8,123
Influenza.....	1	1	1	2	2	2	1	1	5	1	774	2,385
Poliomyelitis.....	8	9	12	11	9	9	2	6	6	4	80	134
Meningitis, epidemic.....	897	783	1,064	984	946	891	843	1,102	872	991	9,976	10,750
Rabies.....	343	389	385	408	412	278	417	291	301	319	4,079	4,460
Tuberculosis (all forms).....	577	569	675	721	518	668	571	654	533	817	6,747	8,178
Syphilis.....	934	1,524	991	1,728	770	1,222	583	800	324	400	6,837	7,153
Gonorrhea.....	14	9	10	18	13	17	8	6	4	10	101	117
Pneumonia.....	22	16	42	20	30	15	20	15	11	22	360	225
Septic sore throat.....												
Chancroid.....												

SHOWING THE PREVALENCE OF SEVENTEEN PRINCIPAL COMMUNICABLE DISEASES AND MORTALITY FROM THESE DISEASES IN ILLINOIS
BY COUNTIES AND PRINCIPAL MUNICIPALITIES FOR THE FISCAL YEAR, JULY 1, 1921, TO JUNE 30, 1922.

County or municipality.	Typhoid fever.		Malaria.		Smallpox.		Measles.		Scarlet fever.		Whooping cough.		Diphtheria.		Influenza.		Poliomyelitis.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
The State.....	2,401	337	1,025	69	2,083	26	14,862	142	13,947	261	8,336	264	19,901	1,258	16,235	701	653	145
Adams.....	16	3	3	1	23		10	10	174	2	65		49	8	108	5	1	
Quincy.....	12	3			18		6		117	2	21		29	4	56	21	1	
Alexander.....	11	5	39	6	8		2		1		10	2	43	3	4	10		
Caro.....	7	9		2	5		2		1				21		1	8		
Bond.....	31	4							6		7		50	1	106	3	9	1
Boone.....	1						5		34		25	1	14	1	25	2		1
Brown.....	4						1		19		1		3		1	1		
Bureau.....	36	2	20	1	31		19		60		79	1	132	4	178	4	11	2
Calhoun.....	2	1			4				1				27		237		2	
Carroll.....	10	1			4		2		34		1		32		38		3	
Cass.....	3		3		1		2		25		102	3	94		15	6	9	1
Champaign.....	53	6	1		2		25		141	1	127	2	80		193	3	7	
Urbana.....	17	2			4		10		47	1	73	1	10		14	2		
Christian.....	14	1	1		3		4		24		22		8		59		3	2
Clark.....	31	4			1		6		250	3	23	3	76	4	23		1	
Clay.....	29				4		4		80	3	98		66		53		1	
Clinton.....	31	2	7		7		16			2			41	1	132	3	1	
Coles.....	32	1	1		3		8		24		16	1	293	6	94	9	16	1
Cook.....	270	39	25	1	145	21	11,576	122	5,298	144	4,322	166	9,674	712	3,384	284	167	40
Beryon.....	1												67				6	
Blue Island.....	2				2		54		10		9		45				3	
Chicago Heights.....	235	56	22	1	119	10	10,080	117	4,442	138	2,896	99	8,123	626	2,389	260	134	55
Cicero.....	2				2		10		24		10		27		1		2	1
East Chicago.....	2				2		102		78		156		106		36		1	
East Park.....	2				2		103		68	1	249	1	106		11		6	1
East St. Louis.....	2				2		103		68		27		106		10		6	1
Forest Park.....	2				2		103		68		27		106		10		6	1
Harwood.....	2				2		103		68		27		106		10		6	1
Maywood.....	2				2		103		68		27		106		10		6	1
Oak Park.....	2				2		103		68		27		106		10		6	1
Crawford.....	2				2		103		68		27		106		10		6	1
Cumberland.....	2				2		103		68		27		106		10		6	1
DeKalb.....	10	1	3		6		2		189	2	13		20		53		6	1
DeWitt.....	17		1		3		72		78		22		27		46		2	
Douglas.....	25	1		1	4		17		37	1	53		78	3	145	2	4	1

DIVISION OF COMMUNICABLE DISEASES.

[illegible]

SHOWING THE PREVALENCE OF SEVENTEEN PRINCIPAL COMMUNICABLE DISEASES AND MORTALITY FROM THESE DISEASES—Continued.

County or municipality.	Typhoid fever.		Malaria.		Smallpox.		Measles.		Scarlet fever.		Whooping cough.		Diphtheria.		Influenza.		Polio-myelitis.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Macon.....	51	7			4		23		86		36	2	342	16	278	10	15	4
Decatur.....	26	6			5		17		64		29	2	282	12	66	2	8	3
Macoupin.....	17	1			4		13		109		35	10	89	7	89	7	17	5
Madison.....	30	3		3	18	3	35		197		37	4	408	22	298	10	17	4
Alton.....	7	2			1		16		69		18	1	100	4	172	6	6	
Granite City.....	8	2		2	2		2		9		7		67	6		2		
Marion.....	40	7			127		72		75		37		84	6	86	2	1	
Centra.....	8	2			44		26		19		15		42	2	32	2		
Marshall.....	3				36		58		102		15		40	1	37	2	1	
Mason.....	8	1			3		10		121		24		70	4	17	2	5	
Massac.....	6			2			10		68		9	2	38	1	218	2		
Menard.....				1	5		7		18		41		15	2	120	3	2	
Monroe.....	15	2			40		6		9		6		33	1	23	2		
Montgomery.....	23	5		1	28		6		164		54	2	75	3	58	8	7	3
Morgan.....	28	1			71		5		183		74		47	1	118	4	16	3
Washington.....	18				1		1		71		21		54	1	8	2	5	1
Madisonville.....	24	4							51				33	1	19	1	2	
Oglethorpe.....	28	2			1		3		120		5		29	5	18	6	11	3
Peoria.....	8	3			429	1	148		389	8	108	2	394	18	127	11	10	5
Peoria.....	5	1			264		49		281	6	62		251	11	24	4	8	6
Perry.....	14	1			4		1		8				75	3	23	2		
Perry.....	16	1			1		1		29		8	1	24	2	248	5	1	
Pike.....	4				1		39		71		4		93	8	150	1		
Pope.....	2	4					6						11	1	11	1		
Pulaski.....	7	1		3	2		5		18		8		11	1	4	1		
Putnam.....	49	8		7	2		14		7				38	1	23	1		
Randolph.....	15	2			7		2		18		1		101	4	370	1		
Richland.....	22	8					4		86				69	1	16	1		
Rock Island.....	15			1	85		36		22		111		78	8	268	17	9	2
Moine.....	4				8		27		22		18	1	15	1	70	1		
Rock Island.....	4				1		44		29		89		22	3	16	6		
St. Clair.....	43	15		4	22		4		148	1	90	5	355	17	212	20	7	1
Ballville.....	7	6			1		1		15		36		70	2	14	6		
East St. Louis.....	15	3		2	44		35		84	1	5	3	174	11	81	8	5	1
Saline.....	33	8		3	25		8		54	2	251	16	143	23	256	8		
Sangamon.....	50	6		1	19		46		193	4	206	6	188	12	474	22	32	10
Springfield.....	26	6		1	8		14		108	4			110	7	29	11	16	4

Schuyler	2	1	1	1	119	1	8	1	4	4	1	1	2	2	1
Scott	1	6	6	6	22	1	4	1	8	8	51	1	2	2	1
Shelby	26	1	3	3	50	1	59	1	49	49	56	1	3	3	1
Stark	2	3	3	3	16	1	12	1	20	20	142	1	1	1	1
Stephenson	28	7	7	7	145	1	121	1	184	184	57	7	3	3	7
Frederick	25	6	6	6	86	1	88	1	145	145	71	6	6	6	4
Tazewell	10	2	14	119	221	2	92	2	167	167	7	10	9	9	1
Pekin	9	67	67	67	69	8	6	3	105	105	4	4	4	4	1
Union	33	2	101	4	466	4	14	4	126	126	11	13	13	13	1
Vermilion	36	9	6	1	17	15	4	4	254	254	11	11	11	11	1
Danville	11	6	11	2	175	1	4	4	57	57	14	14	14	14	4
Wabash	7	3	3	3	27	1	5	5	47	47	2	2	2	2	4
Warren	1	1	1	1	98	1	16	2	26	26	195	3	3	3	3
Washington	16	2	5	17	6	6	25	2	100	100	23	10	10	10	3
Wayne	12	4	8	4	29	3	23	7	124	124	45	11	11	11	4
White	18	6	1	8	3	2	7	1	76	76	38	1	1	1	4
Whiteside	23	3	12	1	100	6	68	1	24	24	60	20	20	20	3
Will	112	11	6	3	181	2	43	1	256	256	87	8	8	8	3
Joliet	71	10	10	1	28	1	15	1	153	153	11	11	11	11	1
Williamson	87	12	144	8	290	26	132	16	218	218	22	11	11	11	1
Herrin	4	31	31	31	32	8	1	8	38	38	2	2	2	2	2
Winnebago	22	6	168	1	493	8	180	2	381	381	11	11	11	11	1
Rockford	17	4	162	4	541	6	139	1	324	324	9	9	9	9	1
Woodford	8	21	21	21	137	1	10	1	19	19	3	3	3	3	4

SHOWING THE PREVALENCE OF SEVENTEEN PRINCIPAL COMMUNICABLE DISEASES AND MORTALITY FROM THESE DISEASES—Continued.

County or municipality.	Epidemic Meningitis.		Rabies.		Tuberculosis (all forms).		Syphilis.		Gonorrhea.		Pneumonia (all forms).		Septic Sore Throat.		Chancroid.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
The State.....	236	62	10	1	15,494	4,682	8,763	421	12,252	38	13,032	4,103	928	212	400	—
Adams.....	2	1	—	—	148	37	180	5	215	1	105	28	9	1	1	—
Champaign.....	1	1	—	—	118	20	178	3	214	—	61	18	7	1	1	—
Alexander.....	1	—	—	—	33	33	145	7	26	1	14	22	6	—	2	—
Carro.....	1	—	—	—	29	29	145	5	26	1	9	18	—	—	2	—
Bond.....	1	—	—	—	16	10	4	—	6	—	4	9	—	—	—	—
Roane.....	—	—	—	—	17	7	1	—	—	—	23	6	3	—	—	—
Brown.....	—	—	2	—	3	7	6	—	—	—	5	5	—	—	—	—
Bureau.....	2	1	—	—	58	12	18	1	27	—	70	16	19	1	—	—
Calhoun.....	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Carroll.....	1	—	—	—	3	4	—	2	1	—	14	4	5	—	—	—
Cass.....	—	—	—	—	6	6	11	—	1	—	10	2	1	—	—	—
Champaign.....	2	—	—	—	39	13	82	2	64	—	117	20	8	3	1	—
Champaign.....	—	—	—	—	15	4	60	1	31	—	23	4	5	—	—	—
Urban.....	—	—	—	—	5	5	11	—	7	—	6	2	—	—	—	—
Christian.....	4	—	1	—	56	17	23	2	9	—	38	20	1	2	—	—
Clark.....	—	—	—	—	17	11	4	—	2	—	20	9	—	—	—	—
Clay.....	1	—	—	—	202	6	14	—	15	—	36	4	2	—	1	—
Clinton.....	—	—	—	—	3	9	2	—	2	—	14	10	1	—	—	—
Coles.....	4	—	—	—	37	25	58	—	66	1	14	11	2	—	1	—
Cook.....	94	36	1	—	11,081	2,708	4,555	222	8,252	9	8,509	2,902	172	74	225	—
Mattoon.....	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Berwyn.....	1	—	—	—	4	7	—	1	—	—	16	11	—	—	—	—
Blue Island.....	5	—	—	—	6	6	—	—	—	—	21	12	—	2	—	—
Chicago.....	79	32	—	—	—	—	—	—	—	—	7,153	2,432	117	56	825	—
Chicago Heights.....	5	—	—	—	3	2,503	4,460	208	8,178	8	15	17	—	—	—	—
Cicero.....	—	—	—	—	77	15	28	1	10	—	109	16	2	2	—	—
Evans.....	—	—	—	—	23	16	4	—	8	—	90	14	—	—	—	—
Forest Park.....	—	—	—	—	6	—	—	—	—	—	14	1	—	—	—	—
Maywood.....	—	—	—	—	28	6	—	—	—	—	45	0	—	—	—	—
Oak Park.....	8	1	—	—	51	10	—	—	—	—	181	11	—	2	—	—
Crawford.....	—	—	—	—	28	15	8	1	2	—	6	7	—	—	—	—
Cumberland.....	—	—	—	—	4	—	—	—	12	—	10	2	—	1	—	—
DeKalb.....	—	—	—	—	12	12	6	2	2	—	54	9	—	—	—	—
DeWitt.....	—	—	—	—	21	5	11	1	4	—	34	7	—	—	—	—
Douglas.....	1	—	—	—	10	4	—	—	4	—	20	9	—	—	—	—
DuPage.....	3	—	—	—	73	25	1	1	1	—	43	17	1	1	—	—

Edgar.....	20	17	3	3	5	1	15	3	23	1	3	1	1
Edwards.....	5	5	3	3	18	1	19	2	3	2	2	2	2
Edingham.....	12	12	2	1	18	1	21	9	3	6	7	7	7
Payette.....	8	14	2	1	5	1	11	9	1	3	1	1	1
Ford.....	8	2	3	1	5	1	17	4	3	1	1	1	1
Franklin.....	26	36	56	2	24	2	75	37	1	2	2	2	2
Fulton.....	70	19	6	3	13	3	52	14	29	6	1	1	1
Canton.....	41	6	2	1	6	6	21	6	1	1	1	1	1
Gallatin.....	2	5	1	1	23	1	20	4	2	2	2	2	2
Greene.....	10	13	6	1	23	1	50	9	17	1	1	1	1
Grundy.....	20	5	5	5	2	2	11	6	5	5	5	5	5
Hamilton.....	5	12	2	2	2	2	27	2	5	5	5	5	5
Hancock.....	15	10	5	5	6	6	26	12	4	4	4	4	4
Hardin.....	2	3	3	3	1	1	11	2	2	2	2	2	2
Henderson.....	9	3	1	1	27	1	100	4	8	8	8	8	8
Kewanee.....	45	18	15	1	37	1	21	7	2	2	2	2	2
Henry.....	1	1	1	1	11	1	68	14	1	1	1	1	1
Iroquois.....	16	13	12	1	11	1	41	12	7	3	3	3	3
Jackson.....	28	36	32	1	3	3	20	6	9	4	4	4	4
Murphysboro.....	9	13	22	1	1	1	29	2	2	2	2	2	2
Jasper.....	24	7	1	1	1	1	47	19	6	6	6	6	6
Jefferson.....	17	33	14	3	4	4	9	4	1	1	1	1	1
Jersey.....	3	2	3	2	11	3	7	11	8	8	8	8	8
JoDavies.....	4	5	3	2	3	3	24	3	3	3	3	3	3
Johnson.....	28	65	332	4	240	1	238	57	30	6	6	6	6
Kane.....	222	12	66	39	39	39	57	25	6	6	6	6	6
Aurora.....	131	37	159	5	84	5	54	20	62	2	2	2	2
Elgin.....	40	49	13	2	5	5	64	19	4	4	4	4	4
Kankakee.....	101	6	8	8	1	1	35	7	15	2	2	2	2
Kendall.....	11	6	1	1	66	8	35	32	2	2	2	2	2
Galesburg.....	37	18	71	5	96	4	102	57	6	6	6	6	6
Knox.....	29	12	64	5	67	4	157	54	22	3	3	3	3
LaSalle.....	83	66	42	2	28	4	41	19	8	8	8	8	8
LaSalle.....	46	6	20	2	6	6	41	8	1	1	1	1	1
Ottawa.....	10	4	2	1	6	6	9	9	1	1	1	1	1
Sreator.....	2	16	13	1	13	1	109	33	15	4	4	4	4
Lake.....	26	32	33	9	19	9	18	13	25	8	8	8	8
Waukegan.....	24	20	23	1	10	10	14	13	3	3	3	3	3
Lawrence.....	25	13	12	2	44	2	31	12	4	4	4	4	4
Lee.....	10	36	79	44	44	44	57	13	3	3	3	3	3
Livingston.....	32	33	44	3	9	9	85	11	1	1	1	1	1
Logan.....	1	1	1	1	2	2	6	6	2	2	2	2	2
McDonough.....	15	14	3	3	3	3	57	1	1	1	1	1	1
McHenry.....	15	14	3	3	2	2	44	4	4	4	4	4	4
McLean.....	145	33	55	1	42	1	42	23	19	7	7	7	7
Bloomington.....	17	15	48	35	35	35	16	16	3	3	3	3	3
Macon.....	126	22	265	10	267	2	42	42	1	1	1	1	1
Dexter.....	114	17	258	8	260	2	84	35	5	5	5	5	5

SHOWING THE PREVALENCE OF SEVENTEEN PRINCIPAL COMMUNICABLE DISEASES AND MORTALITY FROM THESE DISEASES—Concluded.

County or municipality.	Epidemic Meningitis.		Rabies.		Tuberculosis (all forms).		Syphilis.		Gonorrhea.		Pneumonia (all forms).		Septic Sore Throat.		Chancroid.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Macoupin.....	3	1	.....	.....	18	18	31	2	30	.....	82	17	.....	.....	2	.....
Madison.....	2	1	.....	.....	86	53	189	7	270	.....	204	55	.....	.....	17	.....
Alton.....	.....	.....	.....	.....	37	10	160	2	211	.....	72	14	.....	.....	18	.....
Granite City.....	.....	.....	.....	.....	20	8	29	.....	4	.....	42	20	.....	.....	.....	.....
Marion.....	1	.....	.....	.....	40	23	2	3	4	1	42	20	.....	.....	.....	.....
Centuria.....	1	.....	.....	.....	27	17	2	2	.....	.....	10	8	.....	.....	.....	.....
Marshall.....	.....	.....	.....	.....	20	11	14	.....	1	.....	10	8	.....	.....	.....	.....
Mason.....	.....	2	.....	.....	27	17	10	2	22	.....	2	1	.....	.....	.....	.....
Massard.....	.....	.....	.....	.....	46	2	2	.....	.....	.....	13	5	.....	.....	.....	.....
Menard.....	.....	.....	.....	.....	8	2	2	.....	1	.....	1	1	.....	.....	.....	.....
Monroe.....	1	.....	2	.....	9	4	4	.....	2	.....	24	13	.....	.....	.....	.....
Montgomery.....	.....	.....	.....	.....	3	.....	.....	.....	.....	.....	2	1	.....	.....	.....	.....
Morgan.....	1	.....	.....	.....	77	22	54	.....	94	.....	27	42	.....	.....	2	.....
Jacksonville.....	.....	.....	.....	.....	46	40	100	8	61	2	57	28	.....	.....	.....	.....
Moultrie.....	.....	.....	.....	.....	20	32	103	6	38	2	80	20	.....	.....	.....	.....
Ogle.....	5	1	.....	.....	8	4	2	2	12	.....	9	5	.....	.....	.....	.....
Peoria.....	11	1	1	.....	47	8	.....	1	.....	.....	21	15	.....	.....	.....	.....
Peoria.....	11	1	.....	.....	387	72	474	13	470	4	60	48	.....	.....	37	.....
Perry.....	.....	.....	.....	.....	180	34	355	12	430	4	18	33	.....	.....	35	.....
Pike.....	3	.....	.....	.....	35	9	9	1	18	.....	26	6	.....	.....	1	.....
Pike.....	.....	.....	.....	.....	18	13	3	.....	5	.....	17	4	.....	.....	.....	.....
Pope.....	.....	.....	.....	.....	6	6	3	.....	16	1	16	6	.....	.....	.....	.....
Pulaski.....	.....	.....	.....	.....	1	12	2	.....	.....	.....	3	2	.....	.....	.....	.....
Putnam.....	2	.....	.....	.....	2	2	2	4	.....	.....	.....	13	.....	.....	.....	.....
Randolph.....	.....	.....	.....	.....	9	18	56	1	2	.....	6	2	.....	.....	.....	.....
Richland.....	3	2	.....	.....	17	11	17	.....	83	.....	30	11	.....	.....	31	.....
Rock Island.....	7	2	.....	.....	232	70	197	11	327	1	22	3	.....	.....	.....	.....
Moline.....	1	1	.....	.....	109	17	73	6	168	.....	176	42	.....	.....	12	.....
Rock Island.....	5	.....	.....	.....	97	31	121	.....	167	.....	61	6	.....	.....	7	.....
St. Clair.....	5	.....	.....	.....	119	91	339	15	299	1	69	11	.....	.....	6	.....
Bellville.....	.....	.....	.....	.....	4	20	55	.....	35	.....	139	20	.....	.....	5	.....
East St. Louis.....	5	.....	.....	.....	114	35	294	.....	261	.....	6	1	.....	.....	.....	.....
Saline.....	1	.....	.....	.....	32	29	35	1	52	1	87	35	.....	.....	.....	.....
Sangamon.....	4	2	.....	.....	195	67	432	11	364	.....	31	18	.....	.....	3	.....
Springfield.....	2	.....	.....	.....	149	41	424	9	354	1	262	55	.....	.....	24	.....
Schuyler.....	.....	.....	.....	.....	3	3	4	1	.....	.....	208	40	.....	.....	24	.....
Scott.....	2	.....	.....	.....	3	4	.....	.....	.....	.....	8	1	.....	.....	.....	.....

Shelby	1	19	21	2	1	1	6																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
--------	---	----	----	---	---	---	---	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

SHOWING COST OF COMMUNICABLE DISEASES

County.	Estimated population January 1, 1922.	Typhoid fever.	Malaria.	Smallpox.	Measles.	Scarlet fever.	Whooping cough.	Diphtheria.	Influenza.
The State..	6,659,704	\$1,557,825	\$1,662,520	\$196,600	\$227,400	\$508,050	\$375,900	\$1,209,890	\$2,612,582
Adams.....	*62,188	14,425	3,580	1,510	100	5,450	650	6,400	16,580
Alexander.....	24,230	21,450	173,250	535	20	25	2,300	2,725	31,100
Bond.....	*15,045	16,600				150	70	1,800	10,360
Boone.....	*15,322	200			50	850	1,150	900	6,450
Brown.....	*9,336	675			10	400	10	75	9,330
Bureau.....	*42,648	12,075	6,300	2,045	190	1,500	1,340	5,500	14,180
Calhoun.....	*8,245	400		305		25		675	2,370
Carroll.....	16,613	4,850		190	20	850	1,150	800	9,680
Cass.....	18,004	600	480	95	20	625	3,450	2,350	15,650
Champaign.....	58,015	26,175	160	630	250	4,075	2,370	2,000	11,230
Christian.....	39,254	5,525	160	210	60	7,900	3,450	4,100	12,990
Clark.....	*21,165	16,600		95	40	3,650	20	4,950	3,330
Clay.....	*17,684	5,175		365		425	980	4,825	10,620
Clinton.....	22,971	11,400	1,120	440	160	225	1,150	1,575	9,550
Coles.....	35,228	14,700	3,260	210	80	3,350	1,150	10,625	28,840
Cook.....	3,186,465	161,275	7,100	54,010	182,860	211,600	190,900	633,450	914,240
Crawford.....	*22,771	21,450	480	420	20	4,750	30	6,025	3,630
Cumberland.....	*12,858	4,850			20	3,325	1,150	500	6,290
DeKalb.....	*31,339	1,750	12,750	210	760	300	370	1,700	3,110
DeWitt.....	19,324	1,150	160	210	70	1,475	1,150	3,600	7,650
Douglas.....	19,872	7,350	3,260	265	170	925	530	4,700	1,360
DuPage.....	43,908	1,550	320	325	4,310	4,075	1,180	4,800	13,050
Edgar.....	*25,769	2,025		230	70	4,075	90	4,075	29,230
Edwards.....	*9,431	9,575		95	50	1,300	40	2,325	6,940
Effingham.....	*19,556	26,175		210	500	400	1,150	2,975	9,630
Fayette.....	*26,187	26,100	4,860	1,855	10	950	2,300	7,200	7,580
Ford.....	*16,466	400			80	1,725	1,150	1,175	3,350
Franklin.....	63,753	92,575	109,300	2,390	1,050	6,500	11,500	11,200	41,060
Fulton.....	*48,163	4,850	28,600	2,905	1,050	3,725	6,900	7,525	14,420
Gallatin.....	*12,856	5,125	109,300	95	20	225	1,150	2,775	1,040
Greene.....	*22,691	4,850	34,800		2,100	1,350	10	9,225	4,150
Grundy.....	*18,508	4,450			380	775	220	9,150	3,380
Hamilton.....	*15,920	28,475			10	875	2,300	5,950	6,920
Hancock.....	*28,523	14,300		765	1,050	1,325	270	775	1,800
Hardin.....	7,641	9,575	54,650				1,150	2,400	6,520
Henderson.....	9,778	600	3,260		80	650	120	3,050	13,350
Henry.....	45,366	28,600		210	280	4,800	950	2,725	16,370
Iroquois.....	*34,841	9,300	160	975	430	2,825	2,300	4,400	32,680
Jackson.....	37,491	23,625	28,600	2,370	10	400	8,050	12,950	7,370
Jasper.....	*16,064	14,300	160		10	350	1,150	1,775	13,190
Jefferson.....	*28,480	38,050	320	3,365	70	700	50	8,000	3,280
Jersey.....	*12,682	4,850		440	190	225	230	2,300	6,520
JoDavies.....	*21,917	7,150		95	30	675	1,150	1,850	18,800
Johnson.....	*12,022	7,150	28,600	3,250		2,600	2,300	2,275	41,400
Kane.....	101,071	49,800	160	745	4,640	4,900	2,300	18,825	18,700
Kankakee.....	45,804	21,325		3,195	110	1,950	2,300	4,600	6,280
Kendall.....	*10,074	4,850	160	95	2,660	475	550	550	38,210
Knox.....	46,843	3,575		210	1,050	3,000	2,300	6,525	20,340
LaSalle.....	93,501	16,600		2,715	840	6,200	1,150	21,750	22,600
Lake.....	78,245	9,500	480	465	1,520	7,025	1,460	15,525	34,370
Lawrence.....	*21,380	14,425	3,680		420	950	20	14,425	22,600
Lee.....	28,056	4,450		4,225	1,640	3,100	300	800	18,770
Livingston.....	*39,070	14,425	160	880	230	3,225	180	3,225	21,990
Logan.....	*29,562	1,075		190	370	4,575	2,300	2,075	19,360
McDonough.....	27,114	9,575		190	80	2,825	1,100	1,300	53,590
McHenry.....	33,300	6,475		275	350	1,400	1,410	7,925	33,780
McLean.....	70,539	7,825	18,400	1,070	2,920	3,675	1,880	17,350	33,980
Macon.....	67,439	28,850		230	230	2,150	2,300	3,325	22,590
Macoupin.....	58,630	6,000		230	130	2,725	11,500	24,100	16,350
Madison.....	110,407	14,425	83,250	7,935	350	6,025	4,600	3,225	6,510
Marion.....	37,993	29,725	1,600	8,240	720	1,875	370	2,800	12,780
Marshall.....	*14,760	600	1,280	535	350	2,850	150	3,950	8,340
Mason.....	*16,634	4,450	320	2,370	20	3,575	240	3,75	10,500
Massac.....	*13,559	5,050	54,650		100		2,300	3,950	230
Menard.....	*11,694		3,260	325	40	1,700	2,300	1,500	
Mercoer.....	*18,800	9,575	2,240	2,600	70	400	60	375	
Monroe.....	*12,839	2,425		190		50	1,150	1,375	

DIVISION OF COMMUNICABLE DISEASES.

93

FOR THE FISCAL YEAR JULY 1, 1921, TO JUNE 30, 1922.

Polio-myelitis.	Epidemic Meningitis.	Rabies.	Tuberculosis (all forms).	Syphilis.	Gonorrhea.	Pneumonia.	Septic sore throat.	County total.	Per capita.
\$123,100	\$117,410	\$2,075	\$94,324,300	\$1,860,450	\$409,125	\$13,217,415	\$346,640	\$118,751,282	\$17.83
\$ 50	\$ 1,815		\$ 803,000	\$ 28,400	\$ 8,475	\$ 589,660	\$ 1,665	\$ 1,481,760	\$23.81
1,000	60		688,600	31,100	3,750	68,800	60	1,003,775	41.41
800		100	308,100	400	150	22,090		360,780	23.98
			142,350	100		27,240	30	180,220	11.76
1,650	1,815		142,350	600	25	17,960		171,435	18.36
100			244,100	4,900	675	50,560	1,765	348,595	8.17
150	60		22,300			3,640		29,815	3.61
950			82,600	6,400	25	11,830	1,625	120,230	6.13
350	120		202,100	1,100	25	7,430	1,585	236,460	13.13
1,600	240	50	264,400	14,400	1,600	66,415	4,805	399,980	6.89
50			344,450	8,500	225	61,640	1,670	452,770	11.53
50	60		222,400	400	50	27,240	1,585	280,410	13.24
100			372,450	1,400	375	13,290		410,015	23.18
1,300	240		184,350	200	50	30,820	1,585	242,725	10.56
32,000	65,340		508,500	5,800	4,750	36,380	3,170	622,355	17.66
			54,936,200	955,000	229,100	8,020,360	118,270	66,711,705	20.93
850			303,850	3,900	300	22,570	1,585	369,020	16.20
100			142,350	6,400	50	7,430	1,585	174,800	13.58
200			245,100	3,700	175	28,430		288,705	9.21
600	60		82,600	4,200	100	23,320		125,885	6.51
1,600	180		104,300	200	100	30,340	1,585	155,955	7.84
			481,850	3,200	25	53,390	1,585	581,540	13.24
800			344,050	7,050	125	11,145	230	402,395	15.61
800			104,300		25	8,525	1,585	135,560	14.37
150	60		244,650	3,400	450	15,545	30	305,975	15.64
800			284,700	3,300		30,340	3,170	372,515	14.22
1,600	240		42,000	300	3,225	14,515	1,065	70,325	4.27
2,400	240		730,900	11,800	600	136,730	1,985	1,159,410	18.18
	60		386,450	4,250	325	42,170	9,740	515,550	10.70
100			104,300	100	3,125	14,860	20	242,195	18.83
150	120		284,400	3,700	575	28,950	1,745	355,955	15.48
800			104,300	500		18,990		142,415	7.69
150			244,650		50	16,295		306,325	19.24
			202,100	500	150	37,980		261,165	9.15
		50	62,300			7,565	3,190	140,830	18.43
800	1,815		62,300	100		14,380	80	91,190	9.32
800			369,150	4,600	675	67,200	3,220	498,375	10.98
800			222,400	3,500	450	37,980	4,795	306,685	8.80
100	180		650,850	6,300	6,275	18,510	6,390	797,810	21.28
	3,630	50	142,350	3,200	25	12,915	20	183,905	11.44
50			688,600	8,150	100	58,060	60	802,395	28.17
	120		42,000		275	14,380		68,170	5.37
1,750	2,115	50	104,300	6,500	75	32,420	1,585	156,445	7.13
800			122,050	100		12,240	80	199,445	16.59
	60		1,319,450	43,050	9,100	177,900	9,750	1,685,935	16.68
4,900	3,630		761,900	7,500	125	58,060	3,770	884,515	19.31
1,800	240		104,300	100	200	10,505	150	130,945	12.50
			366,150	11,100	14,050	99,620	9,510	555,450	11.85
800			1,199,750	10,400	700	165,930	4,945	1,459,850	15.61
1,300	1,815		650,850	32,850	475	100,710	6,450	851,950	10.88
2,400		1,625	528,800	300	25	39,070	250	636,735	29.78
150	60		303,850	1,200	50	16,225	80	359,380	12.80
800			284,700	7,900	1,100	39,135	40	375,410	9.60
1,650	60		790,650	11,150	50	43,105	4,755	903,930	30.57
3,200	1,815		284,700	7,550	3,175	23,085	3,170	360,425	13.29
4,000	180		284,700	300	50	28,200	90	344,060	10.33
3,200	1,815		688,600	8,600	1,050	14,390	11,215	802,850	11.38
800			446,200	49,850	12,875	130,440	4,755	734,025	10.88
850	60		364,750	9,300	750	55,760	1,585	482,825	8.23
250	3,630		1,075,350	36,500	6,750	168,000	1,585	1,467,865	15.29
			569,400	7,450	3,200	61,640	1,615	708,695	18.65
			142,350	500	25	23,660		182,885	12.39
			223,100	7,600	500	23,660	1,585	280,520	16.86
			344,450	100	3,125	15,410	150	442,065	32.60
			42,000	200	150	14,380		74,395	6.36
			42,000	400	50	41,620	1,585	113,235	6.02
			84,000		25	22,750	10	112,075	8.72

SHOWING COST OF COMMUNICABLE DISEASES

County.	Estimated population January 1, 1922.	Typhoid fever.	Malaria.	Smallpox.	Measles.	Scarlet fever.	Whooping cough.	Diphtheria.	Influenza.
Montgomery	42,659	21,450	3,420	1,485	60	4,100	2,300	3,525	25,380
Morgan	*33,567	7,825			1,050	4,575	740	1,725	13,590
Moultrie	14,883	19,700				1,275	60	1,375	3,280
Ogle	26,630	10,250		95	30	3,550	50	4,000	18,790
Peoria	114,070	14,425		30,955	1,490	14,125	2,300	19,750	35,670
Perry	23,069	5,525		230		200	1,150	3,525	6,430
Platt	*15,714	5,800	480	95	10	725	80	1,700	2,480
Pike	*26,866	6,750	480		1,050	1,775	40	6,725	17,000
Pope	*9,625	16,600	320					5,600	3,210
Pulaski	*14,629	4,850	83,250	190	50		80	825	3,140
Putnam	7,583		1,120	190	140	450		1,500	3,330
Randolph	*29,109	33,200	16,640	440	20	175	10	4,765	6,800
Richland	*14,044	9,575			40	450		1,725	3,260
Rock Island	96,802	3,775	3,260	5,525	1,050	2,700	1,660	6,350	55,280
St. Clair	139,944	59,125	109,300	1,415	1,050	4,250	5,750	19,225	64,110
Saline	40,033	33,200	83,250	1,825		2,450	18,400	18,400	27,360
Sangamon	102,166	26,175	28,600	4,305	1,010	7,025	5,750	11,300	72,940
Schuyler	*13,285	400			10	3,525	1,150	100	6,220
Scott	*9,489	200			60	50	40	200	3,610
Shelby	*29,601	7,550	480	210	60	1,800	1,140	1,775	25,360
Stark	*9,693	400		210		400	120	1,050	6,340
Stephenson	37,931	26,175		440	110	4,175	1,210	10,100	25,370
Tazewell	39,468	52,625	25,500	7,705	200	6,625	920	7,775	36,220
Union	*20,249	11,800	109,300	880	150	200	3,450	9,200	36,230
Vermilion	87,846	38,050	28,600	420	170	13,850	140	13,500	42,420
Wabash	*14,034	5,125	54,650	190	30	1,225	50	2,275	11,250
Warren	*21,488	4,250		210	10	2,450	2,300	1,750	11,010
Washington	*18,035	8,900		1,090	90	150	250	2,500	230
Wayne	*22,772	16,600	75,300	535		725	230	9,150	31,450
White	*20,081	21,450	28,600	535	20	75	1,150	9,600	380
Whiteside	36,518	14,425		535	20	7,800	1,150	2,450	380
Will.	94,671	45,350	4,060	210	2,080	5,625	430	19,050	62,870
Williamson	64,388	49,800	220,800	15,715	100	33,800	18,400	17,550	35,460
Winnebago	96,653	9,975	12,750	420	1,680	16,725	2,900	15,575	10,480
Woodford	*19,340	1,350	160	1,395	50	3,975	1,150	2,400	9,390

* Population as of January 1, 1920; decrease between 1910 and 1920: no estimate made as of January 1, 1922.

DIVISION OF COMMUNICABLE DISEASES.

95

FOR THE FISCAL YEAR JULY 1, 1921, TO JUNE 30, 1922—Concluded.

Poliomyelitis.	Epidemic Meningitis.	Rabies.	Tuberculosis (all forms).	Syphilis.	Gonorrhea.	Pneumonia.	Septic sore throat.	County total.	Per capita.
2,400	60		446,200	5,400	2,350	130,440	30	648,610	15.20
2,450			810,950	28,050	7,725	85,800	4,815	968,785	28.86
100			84,000	6,400	300	15,410	10	131,910	8.89
2,400	1,605		162,650	100		46,230	260	250,010	8.67
4,000	2,235	50	1,461,800	77,560	14,150	147,060	9,510	1,854,710	16.08
			222,400	1,700	450	19,160	3,170	264,260	11.45
800	180		181,800	4,000	125	14,515	1,585	214,375	13.64
			264,400	300	3,500	18,990	4,965	319,900	11.90
			122,050	300		7,160	120	155,350	16.14
	120		184,100	10,250		39,070	1,585	327,510	22.38
			42,060	100	50	7,160	3,180	59,220	7.80
800			364,750	8,700	2,075	34,400	1,705	474,480	16.30
50	3,510		222,400	4,800	3,225	12,030		261,085	18.58
1,550	3,570		1,419,800	43,600	8,175	131,480	8,105	1,695,860	17.51
900	300		1,846,850	67,650	10,575	188,500	6,500	2,384,500	17.03
	60		588,550	6,600	1,300	54,420	1,605	837,220	20.91
8,000	3,630		1,360,050	67,160	12,200	174,700	9,425	1,792,210	17.54
100			62,300	3,500		23,660		100,965	7.59
800	120		82,600			3,640		91,320	9.62
800	60		364,750	3,200	150	46,230	20	453,585	15.32
350			62,300	200		14,590	1,585	87,545	9.03
200			244,100	15,150	5,000	42,860		374,890	9.88
1,000	120		424,500	11,050	825	54,480	3,200	632,745	16.03
			688,900	7,160	550	28,240	1,755	897,755	44.33
200	3,630		1,155,400	38,100	6,650	135,110	4,975	1,481,215	16.86
3,200			42,000	500		12,855	370	133,720	9.52
150			181,800	2,400	525	23,660	1,625	232,140	10.80
			104,300	200	75	22,570	3,170	221,025	12.25
	120		181,800	200	100	31,300	60	270,070	11.85
50			162,650	300	100	18,990	10	243,910	12.14
3,200			264,400	3,400	100	46,230	10	344,100	9.42
2,400	120		1,419,800	7,850	950	115,030	7,925	1,693,750	17.89
800	1,635		893,550	8,500	625	84,210	8,175	1,389,120	21.57
1,600	360		953,300	23,400	3,425	126,740	6,460	1,185,390	12.26
200	3,630		44,600	1,300	50	15,410		85,060	4.39

DIVISION OF TUBERCULOSIS.

THOMAS H. LEONARD, M. D., *Assistant Director and Acting Chief.*

The acting chief assumed charge of the Division of Tuberculosis September 15, 1921, succeeding Dr. George Thomas Palmer who resigned as assistant director and chief of this division March 1, 1921. During the period from March 1 to September 15, 1921, this office was vacant.

The agreement entered into by the State Department of Public Health, the Illinois Tuberculosis Association, and the Central Division of the American Red Cross has not accomplished the results expected owing to changes in personnel brought about by the change of administration. However, recent meetings attended by the officials of the organizations above referred to indicate that a working policy of cooperation will be immediately instituted.

The Illinois Tuberculosis Association has encouraged its county nurses to assist the county health officers in general health problems since the cooperative agreement was reached and it will be the policy of the State Department of Public Health to encourage local, State and National agencies, active in the field of tuberculosis, to broaden their scope to include more general public health problems.

Assuming that all general public health problems will have a tendency to lessen and diminish the incidence and spread of tuberculosis, it would doubtless be to the advantage of most counties in the State to appropriate sums of money for the general public health in place of those now being appropriated exclusively for the anti-tuberculosis movement. It is hoped that the counties having county, municipal or private sanatoria for the care of tuberculous persons will cooperate in caring for patients in neighboring counties that are not as fortunate as themselves in providing accommodations.

COUNTY APPROPRIATIONS.

Some idea of the magnitude of the anti-tuberculosis movement in the State may be gained by the figures furnished for the years 1920 and 1921. The total appropriation by counties for sanatorium work in the two-year period amounted to \$2,664,250, or a yearly sum equal to more than twice the appropriation to the State Department of Public Health. Macon County, for instance, will receive \$75,000 annually for five years; and Will County will receive \$100,000 for the first year

and \$50,000 annually thereafter for three years. The total appropriation by all counties to be expended during 1921 for tuberculosis sanatorium purposes was \$946,350. This sum does not include all money available for the use specified, however, since a number of counties found surplus funds on hand that had been appropriated but not expended in previous years, nor does this sum include money spent by the extra-governmental tuberculosis agencies. The total sum for the year will run into the millions.

The Christmas Seal sale by the State Tuberculosis Association for 1920 brought in \$146,944.35. The estimated amount for the fourteenth Annual Christmas Seal sale (for 1921) was \$125,000.

The following county activities have been reported: Alexander County voted favorably on a tuberculosis sanatorium. Other counties voted on the sanatorium proposition but failed to carry. The Champaign County Sanatorium has been completed and was opened February 16, 1922. It has a capacity of 56 beds. Christian County has purchased a site at Taylorville, Illinois, and plans have been drawn for the sanatorium. Lake County has built a sanatorium under the old County Board Law. Lee County has selected a site. Livingston County Sanatorium was opened September 24, 1922, and has a capacity of 32 beds. McDonough County Sanatorium will open sometime in 1922. Macon County Sanatorium's cornerstone was laid October 30, 1921, and those in charge expect to open soon. Madison County has purchased a fifty-acre tract of land south of Edwardsville. The Sanatorium Board in December decided to discontinue the dispensary clinic held at Alton for the reasons that few persons availed themselves of its benefits and the money can be expended to a better advantage by hiring a nurse to make a canvass at the homes of suspected persons. Morgan County Sanatorium, which was formerly a private institution and which has been undergoing repairs, was formally opened February 1, 1922. Rockford Municipal Tuberculosis Sanatorium has an increased capacity from 39 to 55 beds. On September 11, 1921, Tazewell County dedicated its County Sanatorium which is located at Mackinaw. Whiteside County purchased a three-acre tract and expects to use the present improvements for sanatorium purposes. Will and Ogle County sites are under dispute.

The Chicago Municipal Tuberculosis Sanatorium has added vocational training to its schedule for recovered and partially recovered patients. That is, occupations that will employ patients part or half time as, for instance, half-time stenographers and typists, part-time barbers, telegraphers, etc. The object is to provide an occupation for each individual whose previous occupation was a menace to his health.

SCHOOL ACTIVITIES.

The public and parochial schools of the State have assisted in promoting anti-tuberculosis activities. Illinois employed from July 1, 1919, to June 30, 1920, 351 nurses and 151 physicians in the schools of the State. They examined 193,195 pupils and visited 41,386 homes, where 69,437 children needing medical attention were found. Thirty-nine thousand seven hundred twenty nine of the children and 8,834 of the homes were in Cook County. Of these 11,714 children required medical attention. Thirty-five of the nurses and 30 physicians included in the above figures are employed in Cook County. There are 26 counties in the State outside of Chicago furnishing hot lunches to the school children.

The total number of public health nurses employed in the State January 1, 1922, including Cook County, exclusive of Chicago, was 298. They were classified as follows: Tuberculosis nurses, 86; American Red Cross nurses, 31; general or public health nurses or visiting nurses, 59; school nurses, 105; industrial nurses outside of Cook County, 10; and child welfare-nurses, 7. The number of counties having no nursing service is 24.

Adams, Cook, Champaign, Knox, Lake, LaSalle, McLean, Morgan, Peoria, Will and Winnebago Counties are maintaining open-air schools and open window rooms in the schools. Since our school children are our greatest asset, the medical information obtained in schools has convinced educators that medical inspection and school nursing are as essential during the school life of a child as are the most valuable instructors. The children in the public schools to the number of over 500,000 have joined the Crusader Movement which is an obligation on their part to support public health policies and to perform chores as follows:

1. I washed my hands before each meal today.
2. I washed my face, ears and neck, and I cleaned my finger-nails.
3. I kept my fingers, pencils and everything likely to be unclean or injurious out of my mouth and nose.
4. I brushed my teeth thoroughly after breakfast and after the evening meal.
5. I took ten or more slow, deep breaths of fresh air. I protected others if I spit, coughed or sneezed.
6. I played outdoors or with windows open more than thirty minutes. I tried hard to sit and stand straight.
7. I was in bed ten hours or more last night, and kept my windows open.
8. I drank four glasses of water, drinking some before each meal, and drank no tea, coffee or any injurious drinks.
9. I tried to eat slowly, and only wholesome food including milk, vegetables and fruit. I went to toilet at regular time.
10. I tried hard to keep neat, to be cheerful, straightforward and clean-minded, and to be helpful to others.
11. I took a full bath on each day of the week checked (x).

The Director of the State Department of Public Health is encouraging physicians, nurses and others throughout the State to comply with the law in reporting all known or suspected cases of pulmonary tuberculosis or consumption to the local health authorities by whom the cases must be promptly reported to the State Department of Public Health. The physicians, the county tuberculosis nurses, the community

nurses, Red Cross nurses, school nurses, district health superintendents, sanatoria and other agencies throughout the State have been cooperating in the past year in securing these reports.

BOVINE TUBERCULOSIS.

The Bureau of Animal Industry of the U. S. Department of Agriculture held a meeting at the LaSalle Hotel, Chicago, Illinois, on November 25 and 26, 1921, for the purpose of promoting a policy of bovine tuberculosis eradication and campaigns have been made by several counties in the State to eradicate this disease from dairy herds. Area eradication has been introduced in the following counties: McDonough, McLean, Montgomery, Edgar, Tazewell and Woodford. However, 1,732 herds and 30,365 cattle are under supervision of the State Bureau of Animal Industry. Practically every county in the State has been canvassing its herds in numbers as low as one in Bond County comprising 12 cattle, with two on the waiting list including 91 cattle, to as many as 351 herds in Edgar County with 2,626 cattle and only one herd on the waiting list. McLean, Montgomery, Stephenson, Tazewell and Woodford Counties have 101, 161, 105, 117, 104 herds respectively under supervision. About two and one-half per cent of all milch cows are positive reactors to the tuberculin test. In December, 1921, Illinois had 112 herds tested or 1,078 cattle. Out of this number of cattle, 25 were positive reactors. Total number of herds tested was 666, total number of cattle 11,660, total accredited 7,729 cattle, total number under supervision 30,382, total number cattle on waiting list 10,008, and total number of herds on waiting list 460.

The Director of the State Department of Public Health is urging cities and villages to adopt milk ordinances that will encourage the pasteurization of milk, the object being to limit the spread of bovine tuberculosis and other communicable diseases. The state of New York reports that 50 per cent of the babies of that state who die of tuberculosis are infected with bovine tuberculosis and are supposed to have died of this disease. At the present time, practically all milk in the City of Chicago is being pasteurized. Pasteurization is in operation in Galesburg, Quincy, LaSalle, Oglesby and Peru Health Districts; and in numerous other cities throughout the State. It is hoped that when the cities generally in the State of Illinois have ordinances on pasteurizing milk that the morbidity as well as the mortality of tuberculosis will be reduced materially.

GENERAL ACTIVITIES.

Clean-up squads of the U. S. Public Health Service have helped to give care and custody to persons suffering with tuberculosis. The Pageant of Progress exhibit on tuberculosis as well as that at the State Fair and other exhibits throughout the State have promoted propaganda and publicity in suppressing tuberculosis. The Knights of Columbus

at their last annual meeting decided to take up as part of their philanthropic program the fight on tuberculosis.

The Division of Tuberculosis and a representative of the Division of Sanitation and Engineering conferred with the County Sanatorium Boards in Madison and Will Counties as to location of proposed sites. The Engineering Division was called upon to offer advice and service on water and sewage disposal at the county sanatoria in the following counties:

Kane County on the water supply.
McDonough County on sewage disposal.
Adams County on sewage disposal.
McLean County on water supply and sewage disposal.

The Madison County site was approved and accepted. Will County site was inspected and the sanitary conditions approved but the general condition of the surroundings of the project was not as favorable as many other valuable sites. The Board of Supervisors voted not to purchase the site under consideration.

The scoring card used for recording the results of the State inspection of county sanatoria has been slightly revised and several of the reports of inspection have been received and placed on file in the office at Springfield.

During the months of April, May and June public health exhibits were conducted by the State Department of Public Health in Jackson, Williamson, Union, Saline, Franklin and Marion Counties covering general public health policies and at the same time diagnostic clinics for tuberculosis were held in the same counties and also in DuQuoin, Perry County.

In a number of counties two or more cities situated near enough to each other in the same county could be organized into one public health district under one full-time health officer, giving these cities a health service that they should have and possibly at a cost of no more than they are paying now and as one health officer recently stated: "The saving to the people for what they are paying for water in the milk supply would more than pay for the medical service."

Colonel George M. Bushnell, retired from the Medical Department of the U. S. Army, thinks that the excellent results shown in the last several years in the fewer number of deaths from tuberculosis is accounted for by the better living conditions among the families of the laboring classes and the better and safer water and milk supplies to the public as well as the better sanitation that has been brought about during this period.

The progressive decline in the death rate both from pulmonary tuberculosis and tuberculosis all forms, is illustrated in the table given below.

The mortality of tuberculosis per 100,000 of population for 1921 was 85.1 while for 1918 it was 133.9.

DEATHS FROM TUBERCULOSIS IN ILLINOIS (CALENDAR YEAR).

Causes.	1917		1918		1919		1920		1921	
	State total.	Chicago.	State total.	Chicago.	State total.	Chicago.	State total.	Chicago.	State total.	Chicago.
Tuberculosis, pulmonary.....	7,114	3,291	7,619	3,276	6,379	2,795	5,748	2,275	4,763	1,957
Tuberculosis, all forms.....	8,065	3,800	8,520	3,827	7,358	3,244	6,524	2,652	5,611	2,325

DEATHS FROM TUBERCULOSIS IN ILLINOIS FOR FIVE FISCAL YEARS.

	1917-1918	1918-1919	1919-1920	1920-1921	1921-1922
Tuberculosis, all forms.....	8,402	7,820	6,741	5,594	4,662

The number of cases of tuberculosis (all forms) reported by physicians and field workers for the fiscal year ending June 30, 1921, was 13,265. Those reported for the fiscal year ending June 30, 1922, were 15,494, increased number reported being 2,229.

This does not indicate that there were 2,229 more persons suffering from tuberculosis in Illinois for the latter period, but it does indicate that more and better reporting of tuberculosis was made in the last fiscal year than in the previous year.

One of the large life insurance companies of the United States furnishes the following information on tuberculosis: During the ten year period, 1911-1920, notwithstanding the decline in the mortality of tuberculosis which has taken place during this decade, the disease is actually increasing among girls between the ages of 15 and 20 years. Adolescent girls constitute the only group in which the tuberculosis death rate has not declined. During the six year period, 1910 to 1916, the average annual death rate from tuberculosis among white girls, aged 15 to 19 years, insured in the company, was 144.5 per 100,000; by 1919 this rate had increased slightly to 145.8 and in 1920 rose to 151.5. During the same time that the tuberculosis death rate of adolescent white girls was increasing five per cent, the mortality among adolescent white boys was decreasing twenty-five per cent.

There were 8,217 specimens of sputum sent to the State Laboratory at Springfield during the fiscal year, 1,326 of which were positive or about one in every 6.2 specimens sent to the laboratory. There were 2,612 specimens of blood examined for complement fixation (suspected tuberculosis) and of this number 645 were positive.

The rules and regulations governing the control and prevention of tuberculosis by the State Department of Public Health have been revised and the printed form of information on tuberculosis known as "The Cause, Prevention and Cure of Tuberculosis" is in process of revision and will be issued in the form of questions and answers at an early date.

DIVISION OF ENGINEERING AND SANITATION.

HARRY F. FERGUSON, *Chief Sanitary Engineer.*

With no new laws enacted or rules adopted or changed during the fiscal year that govern the activities of the Division of Engineering and Sanitation the work has been carried on in accordance with the laws and rules presented on pages 54-55 of the third annual report of the department.

PERSONNEL OF THE DIVISION.

With the slightly increased appropriations made by the Fifty-second General Assembly for the biennium July 1, 1921-June 30, 1923, funds became available at the beginning of the fiscal year for an additional assistant engineer and an additional assistant analyst. The new assistant engineer was not obtained, however, until September 1 and the new assistant analyst until October 3. During the year (February 1, 1922) one of the assistant sanitary engineers resigned and no one was located to fill the vacancy and the position remained open during the remainder of the fiscal year. Thus the services of an additional sanitary engineer were actually only available for five months and the services of an additional assistant analyst for nine months during the fiscal year.

With the appropriations made by the Fifty-second General Assembly the former Division of Surveys was discontinued but provision was made for survey work by providing funds for a supervisor of surveys within the Division of Engineering and Sanitation. The position of supervisor of surveys was not filled, however, until March 20, 1922, when malaria-mosquito survey and control work was undertaken in southern Illinois.

At the close of the fiscal year the staff comprised in addition to the chief engineer, four assistant sanitary engineers, one analyst, two assistant analysts, a laboratory helper, a supervisor of surveys, four stenographers, and a water-filter attendant, for taking care of the State House drinking-water supply. Figure 24 shows the number of assistant engineers, analysts and stenographers on the division staff since the division was established in 1915.

ACTIVITIES OF THE DIVISION.

The phases of health and sanitary work that are included in the activities of the Division of Engineering and Sanitation are classified

on page 56 of the Third Annual Report. The regular routine work during the fiscal year of 1921-22 has been quite similar but somewhat larger in volume than that recorded for the two preceding fiscal years in the Third and Fourth Annual Reports. The total number of inspec-

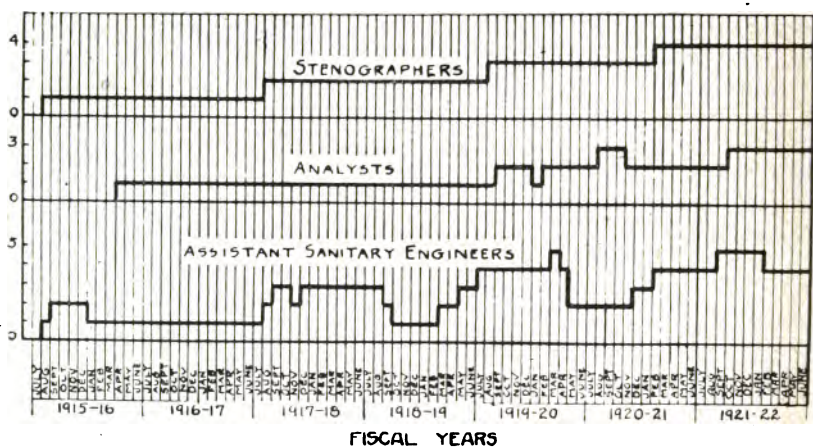


Figure 24.—Diagram showing number of technical assistants and stenographers on staff since division was established.

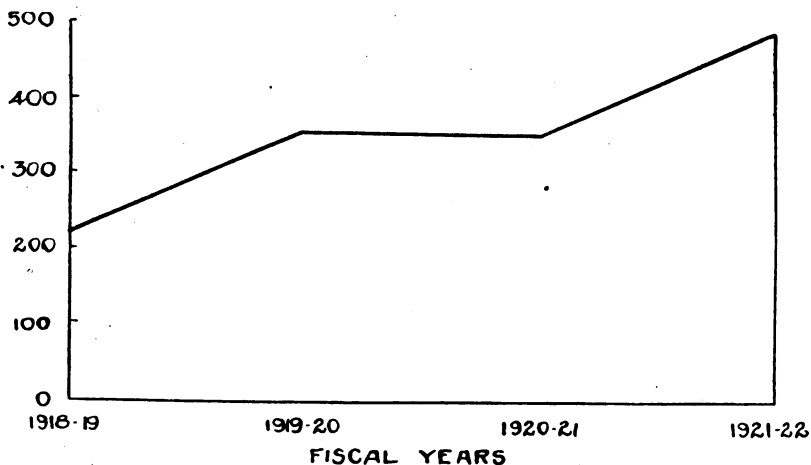


Figure 25.—Number of inspections made for all purposes by fiscal years since July 1, 1918.

tions made for each of the four fiscal years since July 1, 1918, is shown in Figure 25.

In addition to the routine work such as was done and recorded for previous fiscal years, some work which may be classified as new or

of an extended nature has been done during the fiscal year in connection with milk pasteurization and malaria-mosquito control. Also the serious floods along the Illinois and Mississippi Rivers in the spring of 1922 required special emergency work.

The slight increase in appropriations for the division which made possible the services of an additional assistant sanitary engineer for five months, an additional assistant analyst for nine months and a supervisor of surveys for four months of the fiscal year made possible some increase in the amount of work that could be done and especially the start of malaria-mosquito control work in southern Illinois where malaria causes considerable loss of life as well as large economic losses. The technical and stenographic staffs, however, are still much too small to handle promptly and thoroughly all of the work that the division is called upon to do and the comparatively low salaries permissible with funds available are not conducive to retaining competent men in service. The low salaries permissible have, since the division was established, resulted in men resigning to accept positions paying greater salaries and offering better opportunities just as they had become thoroughly conversant with sanitary conditions throughout the State and more experienced in sanitary-engineering work. These changes in the personnel considerably interfere with the work of the division.

Reports are prepared on investigations and examinations made and copies of these reports are sent to all interested parties. Copies of the reports are also retained in the permanent department files and are frequently consulted. Reports have of necessity been only typewritten, but since many of them would be of value if published, it is again hoped that rather complete abstracts of the reports can at some time in the future be published and made available for greater use. The press of regular new work has not so far permitted the preparation of such abstracts and, therefore, special requests for funds for editing and publishing reports have not been made.

The activities of the division for the fiscal year are presented and summed up briefly in the following part of this report which for ready reference has been arranged in accordance with the subjects handled.

PUBLIC WATER SUPPLIES.

First consideration is given to public water supplies, for a public water supply of good sanitary quality and adequate in quantity is undoubtedly the most important improvement in any municipality. A public water supply of questionable quality is a grave source of danger not only to the residents of the city but to persons visiting the city who are not aware of its unsatisfactory quality. Assistance is given to municipalities that are installing public water supplies, improving existing supplies, and operating waterworks systems, especially water-purification plants.

During the fiscal year 200 field investigations were made relative to existing and proposed public water supplies as compared to 150 investigations during the preceding fiscal year. This increase in investigations was possible because of the services of an additional assistant sanitary engineer and an assistant analyst for a portion of the year. The number of field investigations made relative to existing and proposed public water supplies during the last four fiscal years is shown in Figure 26.

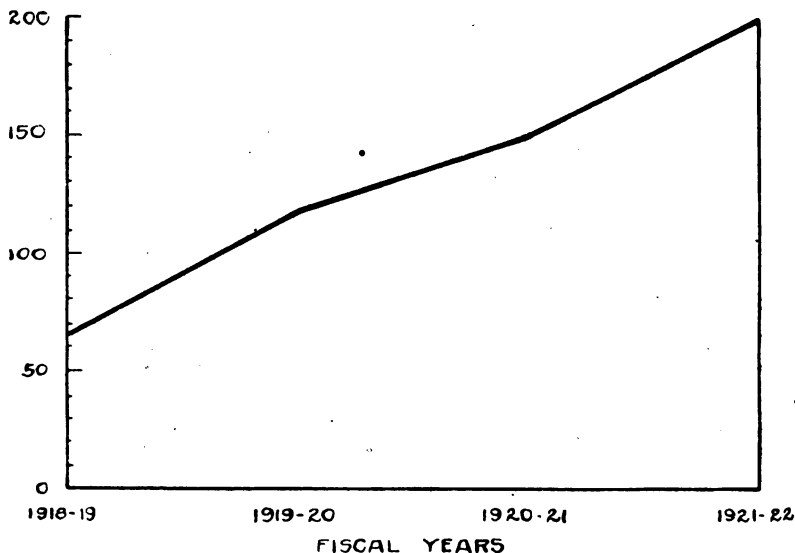


Figure 26.—Number of investigations made of existing and proposed public water supplies by fiscal years.

Not only does the experience of the department indicate that more frequent and prompt examinations of some public water supplies and proposed public water supplies should be made than is now possible with the limited staff, but there are increasing demands from municipalities and individuals for inspections and evident desire that the department exercise more complete supervision over the sanitary quality of public water supplies. This demand can not be met without legislation and increased personnel.

PROPOSED NEW WATER-SUPPLY PROJECTS.

The functions of the division in connection with new water-supply projects are stated on page 57 of the Third Annual Report. An important part of this work is the review of plans and specifications for proposed new water supplies. In reviewing proposed installations the division has the advantage of the studies made of all the existing public water-supply installations in the State, and consequently the cities

installing supplies are given the advantage of the experience gained in other municipalities.

During the fiscal year 13 investigations were made relative to proposed new public water supplies at the following 9 places:

Cartersville.	Kampsville 2.	Royalton.
Hartford.	Martinsville.	Sesser 3.
Highland.	Oblong.	Zeigler.

Conferences were held (at Springfield unless otherwise noted) with city or waterworks officials or engineers during the last six months of the fiscal year (no record kept of first six months) in connection with proposed new public water supplies for the following places:

Cartersville (Herrin).	Hurst (Cartersville).	Royalton.
Gillespie 2 (Pana 1).	Pittsfield.	South Pekin.

Plans, specifications or reports relative to proposed new water supplies submitted by cities or their engineers were reviewed during the last six months of the fiscal year (no record kept of the first six months) for supplies at the following places:

Cartersville.	Girard.	Sterling.
Cobden.	Mt. Prospect.	Virden.
Gillespie.	Sesser.	

PROPOSED IMPROVED WATER SUPPLIES.

The increase in water consumption in a number of municipalities, caused partly by an increase in population and partly by the increased desire of people for modern sanitary convenience, has resulted in a number of municipalities giving consideration to improved supplies. An increased public sentiment, in favor of supplies of better sanitary quality and in certain instances of better mineral quality has also been a very important factor in causing a number of municipalities to give consideration to improving existing unsatisfactory supplies. The functions of the division in connection with improvement of existing unsatisfactory supplies is similar to that for proposed new supplies, and are stated on page 58 of the Third Annual Report.

During the fiscal year 36 visits were made relative to proposed improved public water supplies at the following 24 municipalities:

Altamont.	Herrin 3.	Olney.
Bureau.	Jerseyville 2.	Oswego.
Carbondale.	Johnston City 3.	Pana.
Christopher 2.	Macomb.	Pittsfield.
Decatur.	Nauvoo.	Rockford.
Elgin.	New Athens 2.	Staunton.
Galva.	Nokomis 3.	West Frankfort 3.
Geneseo 2.	North Chicago.	White Hall.

Conferences were held (at Springfield unless otherwise noted) with city or waterworks officials or engineers during the last six months of the fiscal year (no record kept of first six months) in connection with proposed improved water supplies for the following places:

Altamont.	Johnston City 2 (Marion).	Sterling.
Carlinsville.	Macomb 3 (Chicago 2).	White Hall.
Herrin.	Nokomis.	Zeigler 2 (Sesser 1).
Jacksonville.	Paris 2 (Pana 1).	

Plans, specifications or reports relative to proposed improved public water supplies submitted by cities or their engineers were reviewed.

during the last six months of the fiscal year (no record kept of the first six months) for supplies at the following places:

Jacksonville.
Johnston City.
Litchfield.

Macomb.
Paris.

Springfield.
Zeigler.

EXISTING PUBLIC WATER SUPPLIES.

The examination of existing public water-supply systems with special reference to the adequacy and quality of the water supplies has been continued. In August, 1921, a special bulletin was prepared by the division, listing the municipalities having public water supplies, the populations, the sources of the supplies, the treatment if the water is treated, and the sanitary qualities of the waters as determined by field inspections and analyses of samples of the waters. Copies of this bulletin are available for distribution.

The department does not have authority to require that water supplies be made of safe sanitary quality such as is given to similar departments in most of the other States having well-organized health departments. The division, however, is often instrumental in bringing about improvements by means of reports and recommendations submitted to municipal and waterworks officials as the result of examinations made by sanitary engineers of the division. Municipal and waterworks officials are in most cases glad to be advised of the results of the inspections and to follow any suggestions made and if the officials do not act they are plainly responsible for any sickness that may result from the use of unsafe supplies.

Summation made in March 1922 of the existing public water supplies showed that there were public water supplies in 449 municipalities, in 10 unincorporated communities, at 28 State institutions, and at 7 Federal institutions, army posts and naval stations in the State, thus making a total of 494 in all. The development of the public water supplies in Illinois and the population served from public water supplies are shown in Figures 27 and 28.

An article was prepared during the year for presentation before the annual meeting of the Illinois Section of the American Water Works Association at Champaign, March 29, 1922, which considers the development of public water supplies in the State and points out the remaining work to be done before existing water supplies are adequate and satisfactory, and indicates the number of additional public water supplies yet to be installed before all municipalities have such improvements. This article will be printed in a future number of Illinois Health News for the information and use of city and public water-supply officials, engineers, health officers, etc.

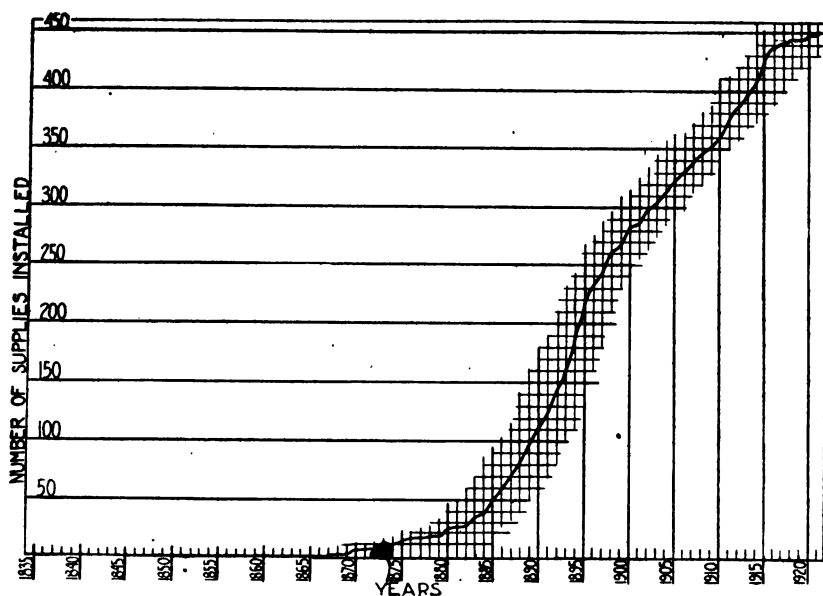


Figure 27.—Public water supplies installed by years in municipalities in Illinois.

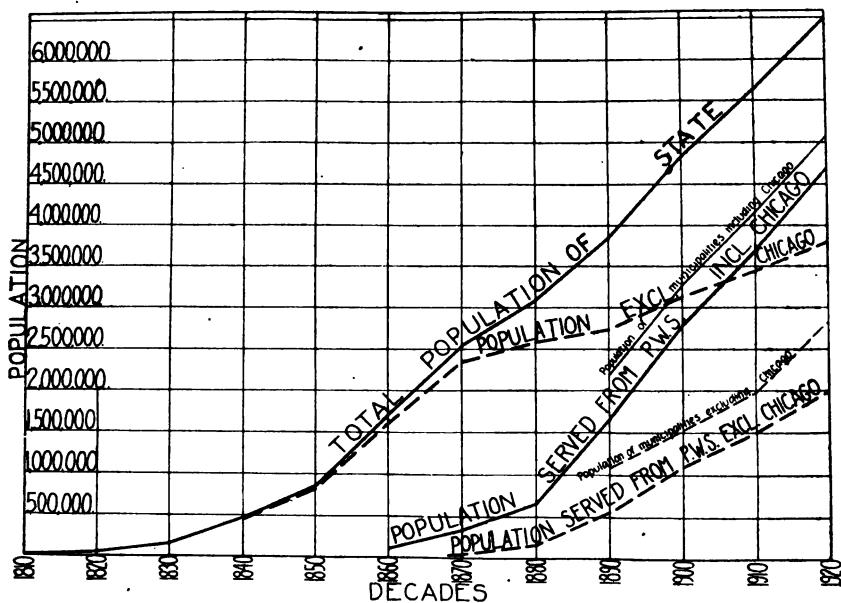


Figure 28.—Population served from public water supplies in Illinois.

During the fiscal year 106 visits were made to examine existing public water supplies at the following 94 places:

Amboy.	Flanagan.	North Chicago.
Anna.	Flora.	Oakland.
Arlington Heights.	Forrest.	Oquawka.
Aurora.	Forreston.	Paris.
Beecher.	Freeport 3.	Pearl.
Belvidere.	Galesburg.	Pecatonica.
Bement.	Grant Park.	Pekin 2.
Bloomington	Greenville.	Peoria 2.
Bradford.	Harvard.	Petersburg.
Bradley.	Hebron.	Pinckneyville.
Brookport 2.	Huntley.	Rankin.
Bureau.	Jacksonville	Rochelle.
Cambridge.	(3 institutions).	Rockford.
Carbondale.	Keithsburg.	Roodhouse.
Carrollton.	Leaf River.	Roseville.
Casey.	Lemont.	Rushville.
Cerro Gordo.	Lenore.	Savanna.
Champaign.	Lincoln.	Standard.
Chrisman.	Little York.	Sterling.
Colfax.	Low Point.	Steward.
Collinsville.	Malta.	St. Charles 2.
Compton.	Marshall 2.	Streator.
Crystal Lake.	Mascoutah.	Thompson.
Duquoin.	Menard Penitentiary.	Tiskilwa.
East Alton.	Mendota 2.	Tuscola.
East Dundee.	Milford.	Watseka.
East Peoria.	Momence 2.	West Dundee.
Edwardsville.	Monmouth.	West Frankfort.
Elburn.	Morris.	Wheaton.
Eldorado.	Morrison.	White Hall.
El Paso.	Mt. Carroll.	Winslow.
Eureka.	Mt. Morris.	

Conferences were held (at Springfield unless otherwise noted) with city or waterworks officials or engineers during the last six months of the fiscal year (no record kept of first six months) in connection with existing public water supplies for the following places:

Edwardsville.	Roodhouse	Villa Park (Chicago).
Petersburg.	Streator.	

WATER-PURIFICATION PLANTS.

The inspection of water-purification plants which is a special phase of the examination of existing public water supplies is quite important since the improper operation of a purification plant for even a short period might result in a large outbreak of sickness in a community. The inspections of water-purification plants are not simply confined to an observation of their condition and operating methods, but the filter-plant operators are given advice and assistance in the control of their plants by an experienced sanitary engineer.

During the preceding fiscal years it was not possible to assist and advise with officials operating water-purification plants as much as was desired, and there still remains more work of this character to be done than can be adequately handled with the present staff of the division. During the fiscal year special effort has been made to examine and improve the operation of water-purification plants and, therefore, 45 visits to such plants at 32 municipalities have been made as compared to only 6 visits during the preceding fiscal year. The places visited to examine water-purification plants were as follows:

Alton 2.
 Anna State Hospital 3.
 Cairo.
 *Centralia.
 Charleston, 2.
 *Christopher.
 Dallas City.
 Danville.
 Eldorado.
 Evanston.
 Fort Sheridan.

Great Lakes Naval
 Training Station.
 Hamilton.
 Herrin.
 Jacksonville.
 Kenilworth.
 Lake Forest.
 Macomb.
 Marion, 3.
 *Marshall.
 **Mascoutah.

McLeansboro.
 Moline.
 Mt. Carmel.
 Mt. Vernon.
 Murphysboro.
 Pana 4.
 Rock Island.
 Salem.
 Sparta.
 Warsaw.
 Winnetka.

*Chlorination only.

**Softening plant.

WATER-BORNE EPIDEMICS.

During the fiscal year an epidemic of dysentery at West Frankfort was investigated and it is possible that this sickness was caused directly or indirectly by the public water supply. The water supply at West Frankfort is subject to constant pollution and is not treated before it is pumped into the mains and thus might readily cause an epidemic of dysentery or typhoid fever if used for drinking or culinary purposes. Because of the unsatisfactory quality of the public water supply, numerous private wells subject to surface and underground pollution are in use and many insanitary privies are in use for the disposal of human wastes. The investigation indicated that the public water supply itself had possibly been responsible for some of the sickness, and the use of doubtful private wells necessitated by the bad quality of the public water supply and prevailing general insanitary conditions were responsible for other cases.

During the year an investigation was also made of an epidemic of typhoid fever at Marshall and the water supply was probably responsible for most of the cases. Marshall has in the past experienced epidemics of typhoid fever because of prevailing general insanitary conditions and lack of control over milk supplies, but the last epidemic may well have been caused by improper construction of new wells at the waterworks. The city had unfortunately not advised the department when changes in the source of supply were made.

The infrequency of water-borne epidemics in the State may possibly be taken as an index of the value and effectiveness of part of the work of this division. All water-borne epidemics could be prevented if water supplies were properly installed and maintained. The division works toward this end but can only recommend changes and improvements to eliminate dangerous conditions of existing water supplies. The absolute prevention of water-borne epidemics will, therefore only be possible either when officials in charge of water supplies follow the advice, suggestions and recommendations of the department or when the department is given authority actually to require that public water supplies be made absolutely free from any pollution.

DRINKING-WATER SUPPLIES FOR COMMON CARRIERS.

Examinations of water supplies for use on interstate carriers are made in accordance with a cooperative arrangement between the State

Department of Public Health and the United States Public Health Service perfected during the latter part of 1918. The method of carrying on this work is stated on page 65-66 of the Third Annual Report.

At the beginning of the fiscal year there were 173 common carrier watering points in use in 87 municipalities in the State. During the fiscal year 92 inspections were made at 83 places in which one or more watering points were located and 760 samples were analyzed. The watering points examined during the year are located at the following places:

Alton 4.	Flora 1.	Murphysboro 2.
Amboy 1.	Forrest 1 (2).	Pana 1.
Aurora 1.	Forreston 1.	Pekin 1.
Beardstown 2.	Freeport 3.	Peoria 14.
Belleville 1.	Galesburg 1.	Pinckneyville 1.
Belvidere 1.	Gilman 1.	Pontiac 1.
Bement 1.	Golconda 1.	Ramsey 1.
Bloomington 3* (2).	Granville 1.	Rankin 1.
Bluffs 1.	Harvard 2.	Rochelle 1.
Brookport 1 (2).	Havana 1.	Rock Falls 1.
Bush 1.	Herrin 1.	Rockford 3.
Cairo 3.	Highwood 1.	Rock Island 3 (2).
Carbondale 1.	Hume 1.	Rossville 1.
Centralia 3.	Jacksonville 1.	Rushville 1.
Champaign 3 (2).	Joliet 3.	Salem 2.
Charleston 1.	Joppa 1.	Savanna 2.
Chicago 31*.	Kankakee 3.	Stanton 1.
Chillicothe 1.	Kempton 1.	Sterling 1.
Clinton 1.	LaSalle 1.	Taylorville 1.
Cypress 1.	Litchfield 1.	Thebes 1.
Davis Junction 1.	Marion 2 (2).	Toluca 1.
Decatur 5*.	Mattoon 2.	Urbana 1 (2).
Dupo 1.	Mendota 1.	Villa Grove 1.
East St. Louis 4.	Moline 2.	Watseka 2.
Effingham 2.	Monmence 1.	West Chicago 1.
Eldred 1.	Monmouth 2 (2).	West Frankfort 1.
Evanston 1.	Mt. Carmel 1.	Wheaton 1.
Findlay 1 (2).	Mt. Vernon 2.	

*Entire number of watering points not inspected.

Number in parenthesis indicates number of times places were visited, and number not in parenthesis indicates number of railroad watering points.

The following list shows the common-carrier water supplies certified, provisionally certified, or condemned during the fiscal year:

CERTIFIED.

Beardstown.	Danville.	Leroy.
Belleville.	Decatur.	Mattoon.
Bloomington (2).	Dekalb.	Mt. Vernon (2).
Buda.	Dwight.	Pana (a).
Bureau.	East St. Louis.	Peoria.
Centralia.	Effingham.	Quincy.
Champaign (b).	Flora (b).	Rankin (b2).
Chicago.	Galena.	Rantoul (b).
Chillicothe (b).	Gilman.	Salem (d*).
Cissna Park.	Golconda (e).	Seneca (b).
Clinton.	Harvard (b)*.	Shawneetown (a-b).
Cypress (a).	Joliet (b)*.	Taylorville (a).

PROVISIONAL CERTIFICATION.

Bloomington.	Findlay (a).	Pinckneyville.
Charleston (a).	Herrin.	Rankin (b).
Chillicothe (b).	Mendota.	Savanna.
Eldred (b).	Peoria.	

CONDEMNED.

Cypress (a).	Roodhouse.	West Frankfort (a).
Forrest (a).		

NOTE.—Water from public supply unless otherwise noted. a—private well. b—railroad well. d—distilled water. e—cistern. *—water from public supply also. 2—supply certified twice during fiscal year.

SEWERAGE.

The function of the division in connection with proposed new, proposed improved, or existing sewerage installations, and the advantages of sanitary sewer systems are stated on page 60 of the Third Annual Report.

The work of the division in connection with such installations has continued the same as in the past. It was hoped that during the fiscal year it would be possible to review and study the information already obtained relative to existing sewerage installations and prepare a bulletin similar to the one for public water supplies for the information and use of public officials and engineers. Such a review and summation of past studies would also make possible the planning for more systematic future investigations, but the constant demands for routine regular work in connection with sewerage installations prevented the preparation of the bulletin.

During the fiscal year 81 investigations relative to existing and proposed sewer systems and stream pollution were made as compared to 68 during the preceding fiscal year. The number of investigations made relative to sewerage installations and stream pollution during the last four years is shown in Figure 29.

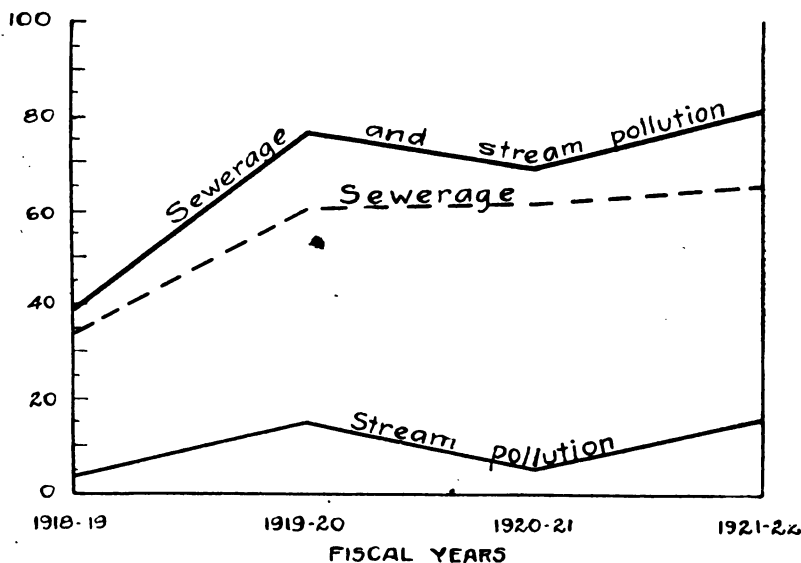


Figure 29.—Number of investigations made relative to existing and proposed sewerage installations and stream pollution.

PROPOSED NEW SEWER SYSTEMS.

Some of the troubles experienced by municipalities with sewer systems result from improper design and defective construction of such systems. The division, therefore, endeavors to prevent, insofar as possible, such troubles occurring in new systems by review of plans and specifications of proposed new or extensive changes in existing systems. Plans and specifications are reviewed in accordance with the rules of the department and investigations are made relative to proposed new or improved installations as indicated on pages 60-62 of the Third Annual Report. This work is quite beneficial to municipalities and its benefits will be realized more after these installations have been in for some time and compared to installations made without competent engineering advice or supervision.

During the fiscal year 23 visits were made to the following 20 places relative to proposed new sewer systems:

Augusta.	Eureka.	Mascoutah.
Benld.	Forreston.	McHenry 2.
Brownstown.	Galva.	New Athens 2.
Buda.	Hartford.	Royalton.
Chrisman.	Hebron.	South Beloit.
Deerfield.	Lemont.	Staunton.
Eldorado 2.	Marshall.	

Conferences were held (at Springfield unless otherwise noted) with city officials or engineers during the last six months of the fiscal year (no record kept of first six months) in connection with proposed new sewerage systems for the following places:

Benld.	McHenry 6.	South Beloit (Chicago).
Eldorado 2.	Morton Grove.	South Pekin.
Hurst (Carterville).	Mt. Pulaski.	Villa Park (Chicago).
Mascoutah.	Royalton.	

Plans, specifications or reports relative to proposed new sewerage systems submitted by cities or their engineers were reviewed during the last six months of the fiscal year (no record kept of the first six months) for systems at the following places:

Benld.	McHenry.	South Beloit.
Eldorado.	Royalton.	

PROPOSED IMPROVED SEWERAGE.

The necessity for improvements in existing sewer systems is constantly arising to meet the increase in population in some cities or to correct difficulties caused by defective design and construction at the time the systems were installed, or to eliminate local nuisances and stream pollution. When the proposed improvements involve new outlets, treatment plants, or other important changes and extensions, investigations are made.

During the fiscal year 26 inspections were made relative to proposed improved sewerage as compared to 12 during the preceding fiscal year. These inspections were made at the following 23 places:

Amboy.
Bloomington.
Bureau.
Carbondale 2.
Carlinville.
Chicago Heights.
Deerfield.
Dwight.

East St. Louis.
Edwardsville.
Elgin.
Herrin.
Jacksonville.
Johnston City.
Lake Zurich.
Lexington.

Marion.
Morris.
Pekin.
Staunton 2.
Taylorville 2.
Urbana-Champaign.
Woodstock.

Conferences were held (at Springfield unless otherwise noted) with city officials or engineers during the last six months of the fiscal year (no record kept of first six months) in connection with proposed improved sewerage systems for the following places:

Johnston City 2 (Marion).	Palatine (Chicago).	Streator 2.
Nokomis.	Park Ridge 3 (Chicago).	Taylorville.
North Shore Sanitary District (Chicago).	Pekin.	

Plans, specifications or reports relative to proposed improved sewerage systems submitted by cities or their engineers were reviewed during the last six months of the fiscal year (no record kept of first six months) for systems at the following places:

Amboy.	Johnston City.	Park Ridge.
Carbondale.	Morris 2.	Streator.
Decatur.	Nokomis.	Woodstock.
Galva.	Palatine.	

EXISTING SEWER SYSTEMS.

In addition to visits made relative to proposed new or improved sewerage installations, inspections were made of sewerage installations at Earlville, Mason City 2, Paris and West Frankfort. Many other places must be visited before the records of sewerage conditions in municipalities in Illinois will be complete and up-to-date but such studies can be undertaken only as other work permits.

SEWAGE TREATMENT PLANTS.

The improper operation of sewage-treatment plants naturally has not as close relationship to the health of communities as the operation of water-treatment plants. The improper treatment of sewage, however, where local conditions show treatment to be desirable, may at times directly affect public health and may more often indirectly affect the public health or give rise to insanitary conditions and nuisances. The people, therefore, naturally turn to health departments for advice and assistance relative to sewage treatment and for relief from conditions caused by inadequate treatment. The treatment or disposal of sewage, although not always a health measure is so closely interwoven with health and sanitary conditions that supervision and regulation of sewage treatment can more properly be handled by the State Department of Public Health than any other State agency.

In reviewing plans or making inspections relative to proposed sewerage installations full consideration is always given to whether or not a sewage-treatment plant will be necessary to prevent objectionable conditions and the amount of treatment that will be required. The

functions and work of the division relative to sewage-treatment plants are stated on pages 63-64 of the Third Annual Report.

During the fiscal year 11 special examinations of sewage-treatment plants have been made at the following places:

Alton State Hospital.	Earlville.	Pana.
Antioch.	Fort Sheridan.	West Chicago.
Bushnell.	Galva.	Woodstock.
Cambridge.	Mendota.	

STREAM POLLUTION.

The attitude of the department relative to stream pollution is indicated on page 64 of the Third Annual Report. Stream pollution may be objectionable because of its connection with water supplies and the resultant direct effect upon public health, or because of its indirect effect upon public health, or because it simply constitutes a nuisance. Possibly the majority of cases of stream pollution at the present time may be classified merely as nuisances, but as the population of the State increases the development of water supplies from streams increases, and the relationship between health and stream pollution increases.

The department must necessarily make examinations relative to stream pollution to protect the public health especially when public water supplies are involved, and with its laboratory facilities and sanitary engineers it can undoubtedly handle questions of stream pollution more economically than any other State agency. A division of studies of stream pollution between State agencies depending upon whether the conditions are or are not detrimental to health would eventually result in duplication of laboratory equipment, field investigations, and valuable data and records, thus adding to the expense to the State and at the same time possibly producing lessened benefits.

During the fiscal year 16 investigations were made of stream pollution in addition to routine investigations of sewage disposal, as compared to 6 investigations during the preceding fiscal year. These investigations were made at the following 15 places:

Chicago.	Edwardsville.	Mason City.
Chicago Heights 2.	Effingham.	Milford.
Chrisman.	Galva.	Round Lake.
Clinton.	Georgetown.	Willow Springs.
Dekalb.	Kenilworth.	Woodstock.

TREATMENT OF INDUSTRIAL WASTES AND SEWAGES.

The function of the department relative to the treatment of industrial wastes and sewages is indicated on page 65 of the Third Annual Report. During the fiscal year requests to the department have resulted in investigations being made of treatment and disposal of industrial wastes and sewages at Chrisman (cannery wastes), Effingham (dairy wastes), and Round Lake (creamery wastes).

SANITARY SURVEYS.

In the appropriations for the biennium, July 1, 1921—June 30, 1923, the Fifty-second General Assembly eliminated the Division of Surveys and Rural Hygiene as a separate division but made provision for some continuance of that work by provision for a supervisor of surveys in the Division of Engineering and Sanitation. No sanitary surveys, however, were undertaken during the fiscal year since the position of supervisor of surveys remained vacant until March 1922. The supervisor of surveys' time since then has been devoted to malaria-mosquito surveys and control in southern Illinois, which work is described in the following paragraphs under that heading.

MALARIA-MOSQUITO CONTROL.

Systematic efforts to prevent malaria by prevention of mosquitoes had never been attempted in Illinois so far as the department is aware until malaria-mosquito control measures were instituted at Carbondale during the fiscal year. This work has been carried on under the supervision of a sanitary engineer in cooperation with local officials and civic organizations, the International Health Board, the United States Public Health Service, the State Natural History Survey and the Illinois Central Railroad.

Malaria is not considered by many to be very prevalent in Illinois, but the records of the Division of Communicable Diseases show that for the preceding fiscal year malaria caused an economic loss to the State of considerably over two million dollars. If a sum equal to only a part of this annual loss were spent in mosquito prevention and control and proper medical treatment of persons already infected with malaria, the disease would be practically eliminated from the State within a few years.

The reason that many people do not consider malaria prevalent in Illinois is because of the fact that although formerly considerable malaria prevailed in central and northern Illinois, the prevalence in those sections has greatly decreased because of improved drainage occasioned by draining land for agricultural purposes. In the southern counties of Illinois, however, much malaria still prevails (see Figure 30) and the greater part of the economic loss from this disease in the State is distributed among about fifteen southern counties. For instance, Jackson County, in which the malaria-mosquito control work has been undertaken, experienced an economic loss during the preceding fiscal year of about three hundred thousand dollars or about one-seventh of the total loss in the State.

An article by the former chief sanitary engineer in the June 1916 issue of Health News called attention to the distribution of malaria in the State and the especially heavy economic losses thereby entailed in southern Illinois. Following this, in 1917, the Southern Illinois Med-

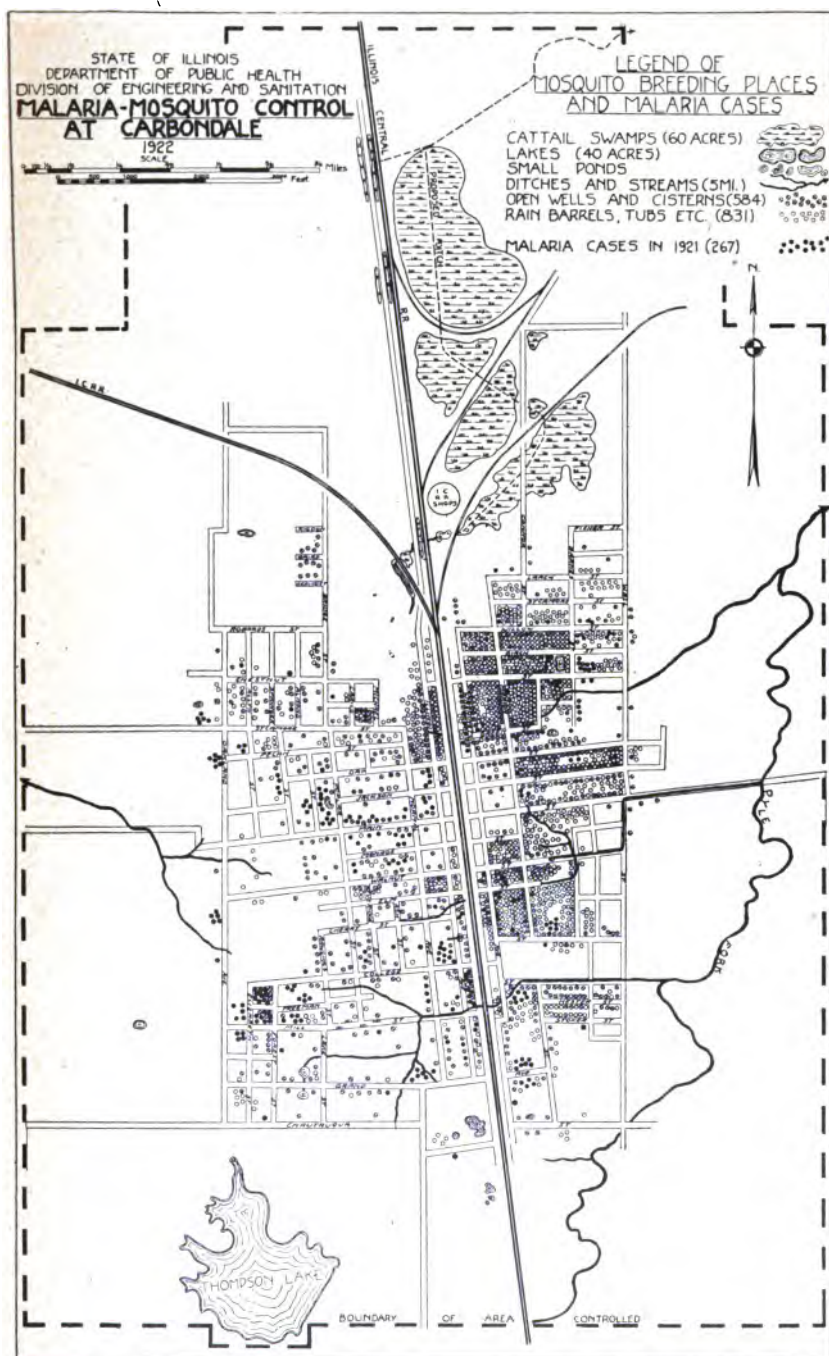


Figure 31.

ical Society passed a resolution asking the State Natural History Survey to make studies of mosquitoes and breeding places in southern Illinois. These studies were undertaken by entomologists of that survey, and sanitary engineers of the State Department of Public Health whenever in cities in southern Illinois repeatedly called the attention of public officials to the high malaria case and death rate and economic loss entailed.

As a result of the surveys and published bulletins of the State Natural History Survey, and the efforts of the Department of Public Health, Carbondale arranged in the early part of 1922 to undertake a systematic malaria-mosquito control campaign. This work was assured by the splendid action of the local Lions Club in guaranteeing to raise a fund of \$2,000, by the agreement of the International Health Board to furnish \$1,000, and by the agreement of the Illinois Central Railroad to drain a number of acres of swamp land adjoining the city at an estimated cost of \$8,000.

Before the 1922 mosquito season opened, a malaria census by means of a house-to-house canvass was made and it was found that there prevailed at Carbondale during the preceding year 267 cases of malaria. At the close of the control season of 1922 another malaria census will be taken to determine the results of the control work. The area under control comprises 6 square miles and extends one-half mile in each direction from the city limits. The city has a population of about 6,300. The area under control includes about sixty acres of cat-tail swamps, forty of lakes and ponds, and about five miles of ditches and streams constituting the major mosquito-breeding places (see Figure 31). There are also in the area an abundance of open wells, cisterns, rain barrels and other containers in which mosquitoes develop unless controlled.

The control work has comprised clearing and oiling of ditches, lowering and oiling of ponds, drainage of swamps, and control of cisterns, rain barrels and other such mosquito-breeding places (see Figures 32 and 33). Top minnows that eat mosquito wigglers are being used successfully in certain parts of the work.

At the close of the fiscal year the work was proving very satisfactory. There had been some delay in starting the drainage of the swamps and obtaining material for lowering the necessary culverts, but a very marked reduction in mosquitoes was noticed by the residents of the city.

Preliminary studies have been made at other places in southern Illinois with a view to instituting malaria-mosquito control measures at those places at some time in the future when those cities become sufficiently aroused to the advantages of systematic malaria-mosquito control work. In addition visits have been made to a few places in response to requests from local officials or residents to advise relative



Ditch before and after being cleared so it could be oiled.

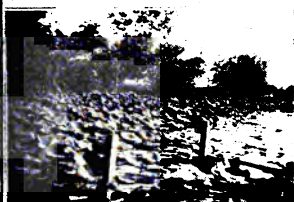


Stagnant sewage-polluted ditch before being cleared. A prolific breeding place for mosquitoes.

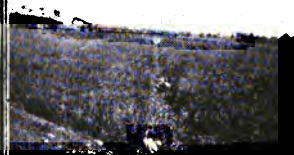


Oiling a cleared ditch to kill mosquito wigglers.

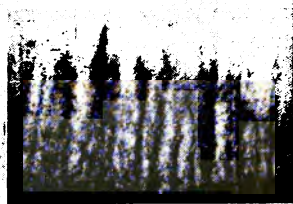
Figure 32.



One portion of Thompson Lake covered with lilies and another portion after clearing out lilies and cat-tails. By clearing out such vegetable growths fishes, especially top minnows, have access to and devour the mosquito wigglers, thus preventing development of adult mosquitoes.



Placing dynamite in path cut through cat-tail swamp for blasting a drainage ditch.



Blasting 700 feet of ditch with dynamite at one shot.

About 80 acres of cat-tail swamps near Illinois Central Railroad shops at north edge of city were prolific breeding places for mosquitoes that spread malaria among persons working in shops or living in the northern part of the city.



Close-up view of path cut through part of cat-tail swamp before blasting ditch.



Ditch immediately after blast filling with water.



Ditch made with dynamite; no hand clearing yet done.



Interested spectators of ditch just blasted.



Catching top minnows (*Gambusia affinis*) from ditch blasted through cat-tail swamp for use in ruin barrels, cisterns, etc.

Figure 33.

to mosquito control. The places visited during the year in addition to Carbondale are as follows:

Anna 3.	Harrisburg.	Maywood.
Beardstown.	Herrin 3.	Murphysboro 6.
Berwyn.	Jonesboro.	Pontiac.
Cartersville 2.	Marion 3.	Riverside.

MILK PASTEURIZATION PLANTS.

Proper pasteurization of milk is the only absolutely sure method of rendering milk supplies safe at all times for human consumption. The maintenance of clean dairies, the cleaning of cows especially before milking, the cleanliness of hands of persons milking and handling the milk, the cleanliness of milk utensils are very desirable, but even with the greatest possible care there is always the possibility of contamination of milk and the final precaution to insure a safe milk should be the pasteurization of milk before it is bottled or put in the final containers for distribution.

Until recently but little consideration was given to the extent that pasteurization was carried on in Illinois from the standpoint of public health. A safe milk supply throughout Illinois is of vital importance and in order to determine present conditions it was decided to obtain, insofar as possible, by means of a questionnaire the number and location of milk-pasteurization plants now in service. Consequently in January 1922, there was sent to the local health officials throughout the State a brief questionnaire simply asking whether or not a milk-pasteurization plant was located in or near the respective communities and if so, the names of the owners.

From the replies a tabulation and map were prepared showing the location and ownership of pasteurization plants in the State. This tabulation and map are printed in Illinois Health News for May 1922. While the list is probably not complete, it is sufficient on which to base plans for inspections of pasteurization plants.

SANITATION DURING FLOODS ALONG ILLINOIS AND MISSISSIPPI RIVERS.

Unprecedented high stages of the Illinois River prevailed during March and April 1922, causing the inundation of thousands of acres of farm land and flooding several cities and many farm homes. High waters also prevailed in the Mississippi River along the southern portion of Illinois and caused some inundation of adjoining lands in the State. The flood waters, in addition to causing large economic losses, tended to cause serious insanitary and health conditions, and consequently as soon as it was known that flood conditions would prevail sanitary engineers were stationed in the flooded areas or areas that would be flooded to supervise sanitary control work during the abnormal conditions.

Work during floods may be divided into four divisions—(1) protection, (2) rescue, (3) relief, and (4) rehabilitation. The sanitary engineers of this division gave some assistance during the first two

phases of the work in the flooded districts, but their more important duties related to relief and rehabilitation, especially the control over water supplies and human-wastes disposal, both in the areas flooded and in camps and temporary quarters established for persons driven from their homes. After the flood waters receded assistance and direction were given in the general clean-up work.

The fact that no epidemic occurred in any of the flooded areas and that the vital statistics records show no increase in diseases which might have been caused by insanitary conditions during floods, is probably the best index of the effectiveness of the sanitary-control work done along Illinois and Mississippi Rivers.

During the sanitary-control work, headquarters were maintained in the flooded areas until normal conditions again prevailed and the following places were visited (many more than once) by sanitary engineers in addition to farm homes:

Alton.
Beardstown.
Browning.
Cache.
Cairo.
East Peoria.
Eldred.

Frederick.
Gorham.
Grafton.
Grand Tower.
Hardin.
Jacob.
Kampsville.

Naples.
Neunert.
Pearl.
Pekin.
Peoria.
Thebes.
Valley City.

MUNICIPAL PLUMBING ORDINANCE.

The "model" plumbing ordinance prepared in 1917 in accordance with section 5 of an Act providing for the licensing of plumbers, in force June 29, 1917, has been furnished municipalities and individuals upon request. It is expected that the plumbing ordinance will be revised and improved during the coming fiscal year.

NUISANCE COMPLAINTS.

If the number of complaints of insanitary conditions and nuisances made to the department are indicative of general public interest in

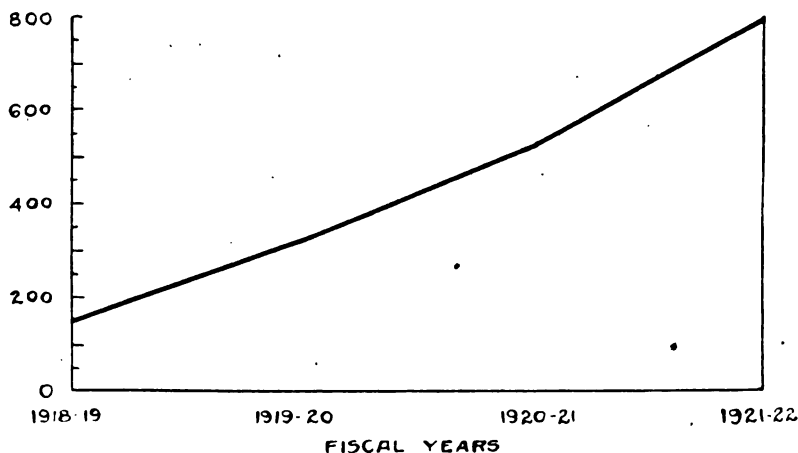


Figure 34.—Number of nuisance-complaint letters written by fiscal years.

sanitary living conditions then it may be rightly concluded that there is a constantly increasing desire for better and more sanitary living conditions, for during the fiscal year 787 letters were written relative to nuisance complaints as compared to 518 letters the preceding fiscal year. A record of the number of nuisance-complaint letters during the past four fiscal years is shown in Figure 34.

The authority of the department relative to nuisances and its policy in handling nuisance complaints are indicated on page 69 of the Third Annual Report.

The complaints received during the fiscal year covered a wide variety of subjects and are listed in the following tabulation:

Alleged cause of nuisance or insanitary condition.	Number of letters written.
Insanitary well	10
Mine wash-water	10
Inadequate water facilities	2
Drinking cups	2
Sewage disposal	36
Open sewer	2
Defective sewerage	17
Inadequate sewerage	10
Stream pollution	4
Creamery wastes	4
Cesspool	28
Privies	61
Human excreta	7
Defective plumbing	5
Inadequate drainage	5
Defective drainage	87
Ditch pollution	6
Pond	6
Insanitary buildings and dwellings	32
Insanitary hotels and restaurants	13
Insanitary jail	2
Insanitary food shop	6
Meat market	1
Stables	41
Hitchracks	4
Manure	14
Hogs	105
Poultry yard	22
Cattle	20
Pigeons	4
Feed lot	3
Zoo	4
Stock pens	9
Carcasses	29
Slaughter house	30
Tankage factory	12
Hide store	2
Garbage and filth	26
Decomposed meal	1
Dump	19
Weeds	18
Icebox odors	1
Hedge	1
Spray liquid	2
Lack of heat	2
Railroad tracks	2
Burning leaves	2
Flies	1
Mosquitoes	1
Screens	2
Expectoration	1
Smoke, dust, gases and fumes	26
Greenhouse	3
General insanitary conditions	24
Total	787

Some of the complaints involved conditions that could not be handled by correspondence and required investigations. In most instances the investigations were made at the request of local health officials to whom generally the complaints had been referred previously by letter and who desired the advice and assistance of a sanitary engineer.

During the fiscal year the following 9 places were visited relative to nuisance investigations:

Place.	Cause of Nuisance.
Arlington Heights	Smoke and gases from factory.
Christopher	Sewage disposal.
Lincoln	Poultry house.
Marshall 2	General insanitary conditions.
Mason City*	Sewage disposal.
Milford	Defective sewerage.
Nelson	Ditch pollution.
Ogle County	Rendering plant wastes.
Winkle	General insanitary conditions.

*Court hearing at Havana.

TUBERCULOSIS SANATORIUMS.

The division cooperates with the Division of Tuberculosis in the examination of sites and the review of plans for county tuberculosis sanatoriums, which sites and plans, according to the State law, must have the approval of the State Department of Public Health. The work of this division in this connection relates to water supplies, disposal of sewage, general drainage, and general sanitary conditions of surroundings. In some instances the availability of public water supplies and sewer systems makes the problem a rather easy one, but in other instances separate water supplies must be developed and suitable means provided for disposal of the sewage.

During the fiscal year investigations were made in connection with county tuberculosis sanatoriums for Adams, Kane, McDonough, McLean and Will Counties.

SCHOOL SANITATION.

An outline of the character of sanitary inspections of schools made by the division is given on page 71 of the Third Annual Report. During the fiscal year sanitary inspections have been made of schools at Assumption, Coffeen, Crawford County, Milton, Morris, Nelson, Oblong and Ridgeville.

MUNICIPAL WASTES, COLLECTION AND DISPOSAL.

Studies of municipal waste collection and disposal and street cleaning, which are important phases of sanitary engineering but possibly less important from the standpoint of public health than the question of public water supplies and sewerage, have been limited because of the amount of water-supply and sewerage work that the division has been called upon to handle. During the fiscal year limited studies were

made of municipal waste collection and disposal at Chicago Heights, Danville, Galesburg, Kankakee and Springfield.

More work of this character is desirable, not in order to regulate such work in the municipalities, but rather to assemble the results obtained in municipalities in Illinois and better to advise with municipalities in regard to the methods used and the results obtained elsewhere. Municipal waste collection and disposal has been given careful and systematic consideration in but few municipalities, but there is a tendency for a desire for more thorough collection of wastes and cleaner conditions in municipalities and work of this nature will become more important in coming years.

SANITATION OF SUMMER RESORTS, CAMPS AND FAIR GROUNDS.

It was not possible to make studies of water supplies, sewerage and general sanitary conditions at the summer resorts, camps and fair grounds in the State as had been contemplated, and it is again hoped that at least some of these places can be inspected before the next season. The records of the Division of Communicable Diseases show an increase in typhoid fever during and immediately following the summer months and probably some of this typhoid fever comes from improper sanitary conditions at summer resorts, camps, and fair grounds. A list of Boy Scout camps and playgrounds and some of the summer resorts and camps in the State has been made available for any work that may be possible in the future.

SWIMMING POOLS AND BATHING PLACES.

Because of the limited staff and demands for other work, investigations of swimming pools were made during the fiscal year at only those places from which requests were received. Some advice was given relative to other pools by correspondence. Undoubtedly considerable improvement could be obtained in the operation of many pools in the State if the staff of the division were sufficiently large to permit of systematic, thorough investigations of all swimming pools and bathing places. It is hoped that a bulletin giving advice and instructions for the construction and operation of pools can be prepared during the coming fiscal year and that later investigations of all pools can be undertaken.

During the fiscal year investigations of swimming pools were made at Danville and Mulberry Grove, of a proposed swimming pool at Jacksonville, and of a bathing beach at St. Charles.

LABORATORY SERVICE.

The service that the laboratories of the Division of Engineering and Sanitation are prepared to give and the character of the work handled are stated on pages 73-75 of the Third Annual Report.

During the fiscal year a total of 2,459 samples were analyzed as compared with 2,494 during the preceding fiscal year. The services of an additional assistant analyst were available for the last nine months of the fiscal year, and it was hoped that it would be possible to handle more analyses, but field inspections and increase in correspondence and review of reports by the senior analyst offset the increase in the number of analyses that might otherwise have been possible. Also it was not feasible to have an assistant engineer help in the laboratory work as much as during the preceding fiscal year.

The requests for analyses have been so great that it has been necessary at times to delay reporting the results, which delays are undoubtedly an annoyance to persons desiring the analyses, and are much regretted by the division. Only with an increase in the laboratory staff and additional stenographic assistance to record and report the results of analyses will it be possible to meet the demands from all sections of the State for analyses of public, semi-public and private water supplies.

The analyses, classified by source and by months, made during the fiscal year are shown in the first of the following tables and the analyses, classified by months, years, and major sources, made since the laboratory work was started, are shown in the two other following tables and in Figures 35 and 36.

ANALYSES MADE DURING THE FISCAL YEAR JULY 1921-JUNE 1922 CLASSIFIED AS TO SOURCE AND BY MONTHS.

Month.	Supplies used on common carriers.		Other public supplies.	Private wells.*				Totals.
	Public supplies	Private wells and other sources		Safe.	Safe with alterations	Unsafe.	** Miscellaneous	
July.....	66	7	38	6	28	35	24	184
August.....	57	18	70	1	42	62	21	253
September.....	59	9	99	6	48	41	13	284
October.....	61	22	89	3	43	52	7	264
November.....	35	12	75	3	41	35	10	221
December.....	31	25	55	9	37	10	9	163
January.....	48	15	84	3	13	9	9	191
February.....	62	40	46	4	21	11	2	161
March.....	62	16	52	11	12	10	17	180
April.....	53	11	66	11	33	16	6	196
May.....	55	11	48	18	18	24	12	186
June.....	38	7	54	19	31	19	8	176
Totals.....	607	153	776	94	367	324	138	2,459

* Includes school wells, semi-public wells and cisterns.

** Includes analyses of sewages, ice, bottled waters and chemicals.

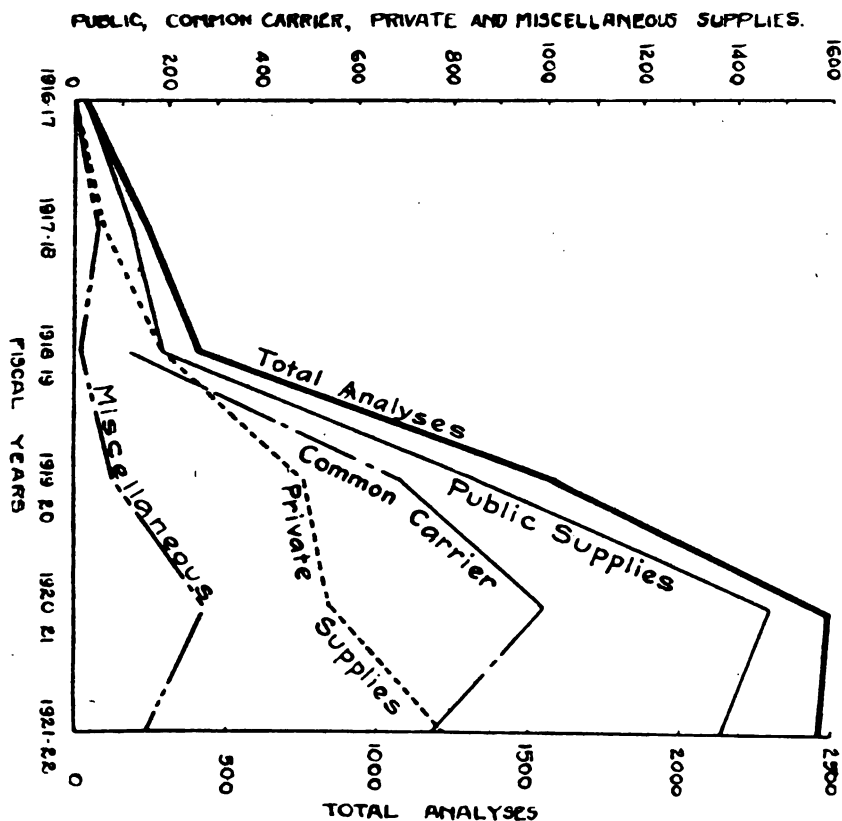


Figure 35.—Number of analyses made each fiscal year since laboratories of division were established, April, 1917.

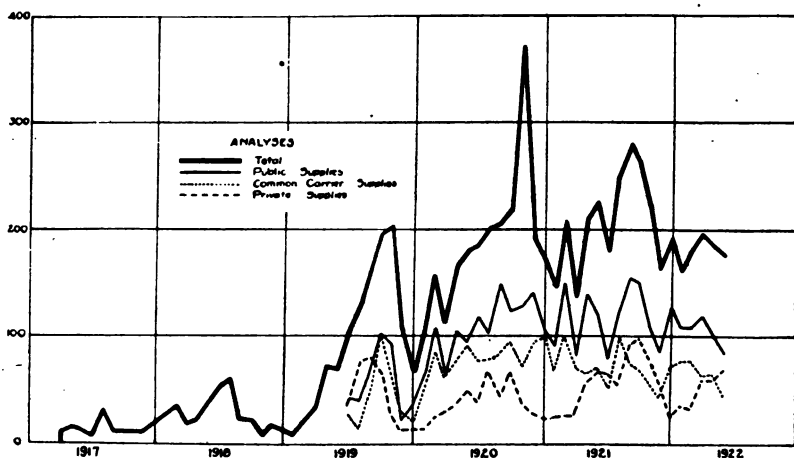


Figure 36.—Number of analyses made monthly since laboratories of division were established, April, 1917.

ANALYSES MADE SINCE LABORATORY STARTED APRIL 17, 1917 CLASSIFIED BY MONTHS

Month	1917	1918	1919	1920	1921	1922	Total
January.....		20	14	66	175	191	466
February.....		27	9	102	149	161	448
March.....		37	23	159	207	180	606
April.....	11	18	35	111	137	196	508
May.....	15	23	73	167	214	186	678
June.....	9	36	70	181	225	176	697
July.....	6	54	100	188	184		532
August.....	31	62	126	204	253		676
September.....	14	23	180	208	284		689
October.....	11	23	198	220	264		716
November.....	11	7	155	375	221		769
December.....	11	17	58	192	163		441
Totals.....	119	347	1,021	2,173	2,476	*1,090	7,226

* Represents only six months of year 1922.

ANALYSES MADE SINCE LABORATORY STARTED APRIL 17, 1917 CLASSIFIED AS TO MAJOR SOURCES BY FISCAL YEARS.

Year.	Public water supplies (1)	Common carrier water supplies. (2)	Private water supplies (3)	Miscellaneous. (4)	Total. (5)
1917*.....	31		2	2	*35
1917-18.....	125		67	53	245
1918-19.....	186	117	186	17	410
1919-20.....	853	693	494	85	1,583
1920-21.....	1,468	995	542	278	2,494
1921-22.....	1,383	760	785	138	2,459
Total.....	4,046	2,565	2,066	573	7,226

(1) Including analyses made for common carriers.

(2) Includes both public and private supplies used by common carriers. This work started August 1918.

(3) Includes school wells, semi-public wells, and cisterns.

(4) Includes sewages, trade wastes, swimming-pool waters, sand, bottled waters, etc.

(5) Totals show correct total number of analyses, for certain public water supplies have been listed in both columns (1) and (2).

* From April 17, 1917 to June 30, 1917.

STATE HOUSE DRINKING-WATER SUPPLY.

Up to 1918 the State purchased bottled drinking-water from a commercial concern because of the turbidity at times of the Springfield public water supply caused by the iron in the water. In the early part of 1918 a pressure-filter installation was made in the laboratories of the division to remove the turbidity, caused by the iron in the Springfield public water supply, and thus make it clear and suitable for drinking purposes and save the State the expense of purchasing bottled water.

Since June 1918 up to the end of the fiscal year 51,486 bottles of water were filtered and distributed to all offices in the Capitol building and the other State offices in Springfield outside the Capitol building. During the fiscal year 14,974 bottles of water were filled with filtered

water and distributed. During the preceding fiscal year 13,163 bottles were filled and distributed.

Based upon the cost of bottled water from commercial concerns, the cost to the State for commercial bottled-water service since the filter installation was made in the division laboratories would have been about \$23,169. The cost to the State for the filter installation and the complete operating expenses since its installation, including labor for distributing the filled bottles, has been about \$6,707. There has been an actual net saving to the State, therefore, since the installation of the filters in the sanitary engineering laboratories of about \$16,462, or \$4,115 a year.

EDUCATIONAL WORK.

The educational work of the division consists of preparation of articles for the department Health News and other publications, bulletins, and newspapers, the making of public addresses on sanitary-engineering and miscellaneous sanitary subjects, and preparation of exhibits as part of the exhibits of the department for State, county and local fairs. When the articles prepared for the department Health News are of value for permanent reference, reprints are made for sending out in answer to requests for information.

A considerable amount of educational work is carried on by means of correspondence. Many letters are received requesting information relative to proper construction of wells, septic tanks, small sewerage installations, swimming pools, and general sanitary matters. In answering letters of complaint relative to nuisances, opportunity is given to do educational work along sanitary lines.

Public addresses have been confined largely to informal talks before city councils, chambers of commerce, or other civic associations relative to water-supply and sewerage projects and general sanitary improvements. During the fiscal year the following places were visited especially to give talks, in addition to places where talks may have been given in connection with regular inspections of water-supply or sewerage projects:

Place.	Subject.
Arthur	Sewerage.
Auburn	Sewerage.
Benton	Malaria-mosquito control.
Brownstown	Sewerage.
Carbondale	Malaria-mosquito control.
Centralla 2	Malaria-mosquito control.
Divernon	Water supply.
Duquoin	Water supply.
Eureka	Sewerage.
Harrisburg 2	Malaria-mosquito control.
Marion	Malaria-mosquito control.
Marshall	Typhoid and water supply.
Mascoutah	Sewerage.
Mt. Morris	School sanitation.
Murphysboro	Malaria-mosquito control.
New Athens	Water supply and sewerage.
Pinckneyville 2	Water supply and malaria-mosquito control.
Sparta	Water supply.
Springfield	Water supply and sewerage.

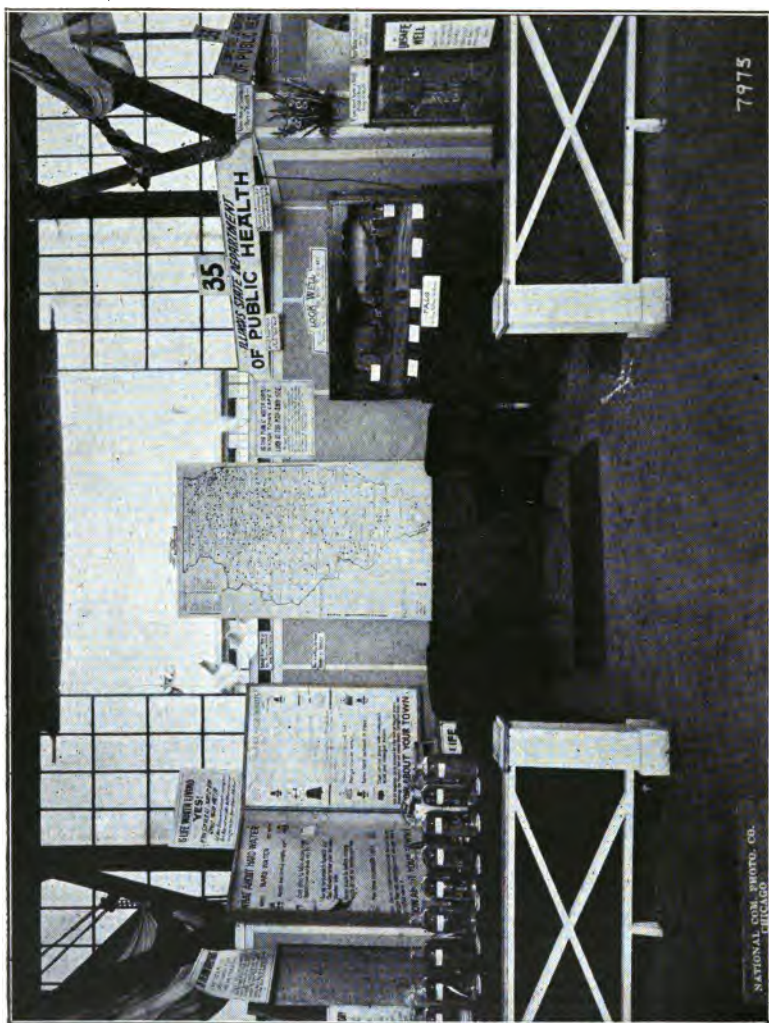


Figure 37.—Booth containing water-supply portion of sanitary engineering exhibit at 1921 Pageant of Progress, Chicago.

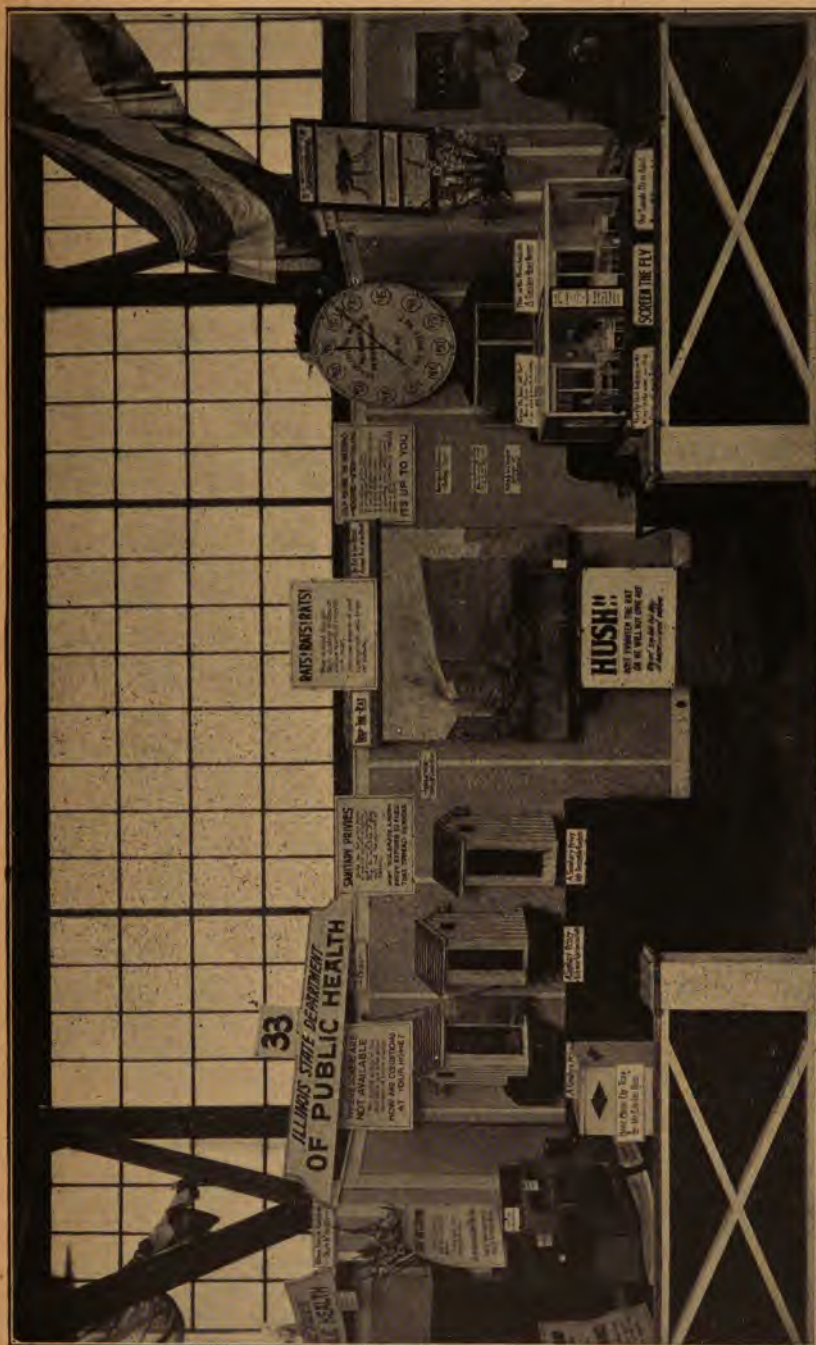


Figure 38.—Booth containing sewage-disposal and general sanitation portion of sanitary engineering exhibit at 1921 Pageant of Progress, Chicago.

Material was prepared for exhibits and members of the division were in attendance with exhibits at the following places:

Benton.	Champaign.	Pinckneyville.
Bloomington.	Chicago.	Quincy.
Carbondale.	Harrisburg.	Rock Island.
Centralia.	Marion.	Springfield.

Pictures of the two booths containing the sanitary engineering exhibit of the department of the 1921 Pageant of Progress, Chicago are shown as Figures 37 and 38.

Meetings of the following societies and associations were attended:

American Water Works Association.
 Illinois Section, American Water Works Association.
 Illinois Society of Engineers.
 American Society of Civil Engineers.
 American Society of Agricultural Engineers (Sanitary Section).
 Conference of State Sanitary Engineers.
 American Public Health Association.
 Health Institute at New York.

MISCELLANEOUS INVESTIGATIONS.

In addition to the places listed in preceding tabulations, miscellaneous investigations have been made at the following places for the purposes indicated:

Place.	Purpose of visit.
Aurora	Water supply and sewerage at fairgrounds.
Belgium	Hotel sanitation.
Benld	Mine wash-water.
Benton Harbor, Mich.	Iron-removal plant.
Bryant	Mine wash-water.
Bush	Mine wash-water.
Chicago	Vegetables contaminated by water.
Danville	General sanitary conditions.
Danville	Rendering plant wastes.
Greenvlew	Defective sewerage.
Greenville	Creamery water supply.
Hamel	Private sewerage installation.
Highland	Creamery water supply.
Homewood	General sanitary conditions.
Hutsonville	Sewerage at high school.
Joliet	Camp water supply.
Kenilworth	General sanitary conditions.
Lake Zurich	General sanitary conditions.
Libertyville	Ice supplies.
Pana	Mine wash-house.
Ramsey	General sanitary conditions.
Rushville	Private sewerage.
Streator	Sanitary condition of jail.
Vandalia	Factory drinking-water supply.
White Hall	General sanitary conditions.
White Hall	Private well.
Winslow	Private sewerage.

Conferences were had with public officials or individuals (at Springfield unless otherwise noted) during the last six months relative to the places and for the purposes noted in the following table:

Place.	Subject of conference.
Antioch	Plans reviewed for treatment slaughter-house wastes.
Athens	Private sewerage.
Cairo	Sanitary control in flooded areas.
Carbondale (Chicago)	Malaria-mosquito control.
Fox River (Chicago)	Sanitary survey.
Ipava	Private sewerage.
Jacksonville	Plans reviewed for swimming pool.
Lincoln	Inadequate drainage.
New Berlin	Disposal of manure.
North Shore Sanitary Dist. (Chicago) ..	Bathing beaches and sewer outlets.
Peoria	Illinois River investigation by U. S. Public Health Service.
Petersburg	Sanitary condition of chautauqua grounds.
Waverly	Private sewerage.

SUMMARY OF ACTIVITIES FOR FISCAL YEAR.

The visits made and work done by the division are summarized in the following tabulation:

	1920-21	1921-22
Visits made and reports prepared relative to—		
Water supplies (total).....	203	292
General inspection of existing public water supplies.....	91	106
Proposed new public water supplies.....	15	13
Proposed improved public water supplies.....	38	36
Water purification.....	6	45
Drinking-water supplies for common carriers.....	53	92
Public sewerage installations (total).....	62	65
General inspection of sewer systems.....	3	5
Proposed new sewer systems.....	31	23
Proposed improved sewer systems.....	12	26
Sewage-treatment plants.....	16	11
Stream pollution.....	6	16
Treatment of industrial wastes and sewages.....	7	3
Sanitary surveys.....	1	(a)
Malaria-mosquito control.....		24 (b)
Milk-pasteurization plants.....		(c)
Sanitary control during floods.....		27 (d)
Nuisances.....	29	10
Water-borne epidemics.....	1	2
Tuberculosis sanatoriums.....	4	5
School sanitation.....	10	8
Municipal waste collection and disposal.....	2	5
Swimming-pool sanitation.....		4
Miscellaneous subjects.....	27	27
Conferences with public officials and individuals (not part of visits and inspections).....	(e)	81 (e)
Plans, specifications, or reports reviewed relative to water supplies, sewerage, swimming pools, etc.....	(e)	34 (e)
Samples of water, sewage, trade wastes, etc., analyzed.....	2,494	2,459
Talks and addresses given and association meetings attended.....	13	30
Exhibits.....		12
Letters written (total).....	4,800 (g)	4,976

(a) Supervisor of Surveys engaged in malaria-mosquito control work.

(b) Effective control measures carried on at one place and surveys and advice given at other places.

(c) Work started during fiscal year; location of pasteurization plants ascertained but no inspections yet made.

(d) Number of places visited. Some places visited several times and farm areas also visited.

(e) For last six months only; no record kept of first six months.

(f) No record kept.

(g) Approximate.

RECOMMENDATIONS FOR FUTURE WORK.

The conditions governing the work and activities of the division are practically the same as at the end of the preceding fiscal year and, therefore, recommendations for future work are the same as given in the report for the preceding fiscal year in the Fourth Annual Report of the department, pages 82-85.

DIVISION OF VITAL STATISTICS.

SHELDON L. HOWARD, *Registrar.*

The outstanding feature in the vital statistic situation of the State at the close of the fiscal year on June 30, 1922 was the pronounced increase in the number of births recorded. A total of 130,286 certificates were received during the year as compared with 126,302 for the year before. The improvement, which is indeed substantial, was not as phenomenal, however, as was that for the year ending June 30, 1921, during which 11,624 more births were registered in the State than during the year before. For the two years the average annual increase amounted to 14,116 registrations or an average of nearly 40 per day over that for the fiscal year ending June 30, 1920.

The progress is but the natural outcome of a determined campaign, the promotion of which was one of the first acts of the present Director of Public Health who accepted the responsibilities of office in February 1921. The Governor had suggested such a course in his inaugural address. It has been pursued relentlessly with the results indicated above. From year to year the improvement in completeness of birth returns will grow less and less because room for improvement in that respect is rapidly vanishing. As the year ended the situation seemed favorable enough to justify a request for a Federal test to determine whether or not the State is now eligible for the United States Birth Registration Area. The test will take place during the coming autumn and its results are anticipated with confident assurance.

A study of the accompanying calendar year statistical table shows 128,992 births reported for 1920 and 131,289 for 1921. This would appear to refute the contentions of this discussion that the improvement in registration resulted directly from a campaign conducted under the present administration. It must be remembered, however, that literally thousands of the returns received in 1921 were for births that occurred during 1920 and were so recorded. A glance at the Fourth Annual Report of the department will show that it records 120,360 births for 1920 while this report shows 128,992 for the same year. This simply means that something over eight thousand delinquent reports were filed for the year as a result of the campaign. A closer study for previous years will reveal that the same cause brought in over sixteen thousand delinquent reports.

MORTALITY.

Interest in mortality statistics for the year centers around deaths among infants under one year of age. While figures for this group are compiled for calendar years only they are no less significant. In 1921 the number of infant deaths was 81.1 per 1,000 births reported; for 1920 it was 96.5. The actual number of infant deaths in 1921 was 10,644 while that for 1920 was 11,618. It is therefore clear that the infant mortality rate in Illinois is not only apparently declining as the increase in completeness of birth registration would suggest but that in face of a growing population nearly 1,000 fewer babies under one year of age died during 1921 than in 1920.

To what other cause can this desirable decline in infant mortality be attributed than to increased efficiency in public health administration? But even with the record low infant mortality rate indicated above, Illinois still far exceeds the Birth Registration Area of the U. S. that reported a rate of 76 infant deaths per 1,000 live births in 1921. This situation suggests an extension of maternity and infant welfare service in the State.

The general mortality rate, although slightly higher than for the preceding fiscal year, is still one of the lowest on record. Deaths from all causes numbered 76,418 as compared with 71,034 for the year before. The rates per 1,000 population for the two fiscal years respectively were 11.4 and 10.8.

In analyzing the mortality statistics it is found that the number of deaths caused by 17 of the major communicable diseases was 2,120 less than for the preceding fiscal year. Declines were especially noticeable in deaths caused by tuberculosis (all forms), measles, scarlet fever, whooping cough, pneumonia, typhoid fever and smallpox. For all forms of tuberculosis the decline was 932; for typhoid fever, 33; for whooping cough, 285; for scarlet fever, 100; for measles, 211. Deaths from poliomyelitis showed a sharp increase due to a rather wide-spread epidemic. Slight increases were recorded against diphtheria, influenza, septic sore throat and syphilis. Details for most of these diseases may be found in the five year mortality and morbidity tables presented with the report of the Division of Communicable Diseases.

The general decline in deaths due to communicable diseases also suggests a greater efficiency in public health administration. It seems highly improbable that deaths from communicable diseases would fall during a period when those from other causes sharply increased unless there were some specific reason therefor. It is significant also that the decline in deaths from communicable diseases in Illinois followed closely upon the heels of a movement that gave the State a larger number of district health superintendents and thus distinctly toned up the public health administration generally.

COMMENTS ON MORTALITY STATISTICS.

Considering the difference in the population, there is practically the same rate of mortality in Chicago and in the rest of the State, but class III—diseases of the nervous system—shows more than twice as many deaths occurring in the State outside of Chicago as in the city. In this connection it must be remembered that all the State hospitals for the insane are located outside of Chicago.

There is an undue proportion of deaths from epidemic and infectious diseases in the State outside of Chicago. The same is true of the puerperal state. More deaths in proportion to the population from old age are reported from the State outside of Chicago than from the city.

On the other hand, a much larger proportion of deaths from malformations are reported from Chicago than outside. This recorded difference may possibly be misleading. Chicago certificates are classified by the Chicago Health Department. The classification of death reports from the rest of the State are made in the State Department of Health. When death certificates from the State at large show "congenital heart disease," which would put the death in class XI, the State Department has been writing to the physicians for further information and as a result of this correspondence a very large proportion have been transferred from class XI to class XII. Apparently such cases have not been questioned in Chicago. This transference of classification from one cause to another as the result of correspondence is in line with the experience of insurance companies and others who have found that a very large proportion of deaths should be assigned to some other cause than that first given in the certificate.

Attention is particularly directed to class XV. It has sometimes been impossible to get any statement of cause of death from the coroners other than "natural cause." Also, deaths without medical attendance in the city of Chicago are always investigated by the coroner or one of his deputies, but in many country districts the coroner makes no investigation in such cases, the certificate of death being signed by the local registrar.

COMMENTS ON GRAPHS.

The graphs of death rates from certain diseases, per 100,000 population in Illinois, during the past four years present some striking features. Deaths from influenza, for example, fell from 17,779 in 1918 to 5,714 in 1920 and from 5,714 in 1920 to 592 in 1921. The difference in the decline between the last two years compared with that for the others is very noticeable.

Poliomyelitis shows a continual decline from 1918 to 1920, but in 1921 there were more than twice as many deaths as in 1920.

The number of deaths from diphtheria and from small-pox, diseases which can be prevented by inoculation, show an increase which should attract general attention.

The death rate from typhoid fever and malaria seems to be fairly uniform though in 1918, perhaps as a result of the influenza epidemic, there was an increase in typhoid mortality.

The rate for whooping cough is irregular while that for scarlet fever shows a continual rise during the four year period.

The number of deaths from pulmonary tuberculosis and from tuberculosis, all forms, shows a rapid decrease. This has been explained by Professor Abbott and others, as being due to the after effects of the great influenza epidemic of 1917 and 1918. That epidemic apparently took off many who would otherwise have lived a few more years and died of tuberculosis. It must be added, however, that the organized fight against tuberculosis has certainly been a very important factor in the falling death rate.

Much time has been absorbed in the birth registration campaign. Engraved certificates of birth were sent to the parents of every child born in the State outside of Chicago during the last six months of the fiscal year, a total of approximately forty thousand. Two field agents of the department made investigations in 78 different counties while prosecutions against physicians, local registrars and undertakers for failing to comply with the registration laws were successfully carried out in eight instances. A number of local birth registration tests were carried out under the direction of the division while special efforts to secure the cooperation of hospitals, local health departments, medical societies and women's clubs in connection with birth registration terminated successfully. About thirty medical societies went on record as favoring complete cooperation with the department in these matters while 44 women's clubs appointed special chairmen for actively participating in the birth registration campaign as a permanent function. As a result of these activities, coupled with the cooperation of district health superintendents, the number of delinquent local registrars has been reduced almost to a minimum while general birth registration has improved to the gratifying extent indicated elsewhere in this report.

During the year the directory of local registrars was revised and published. This was necessary because of a number of changes in the districts. A copy of the directory was mailed to all physicians whose addresses were available.

The volume of office routine showed the usual annual growth and was greatly facilitated during the year due to a slight increase in personnel provided by the Fifty-second General Assembly. Not only has the indexing and filing of all certificates been brought more nearly up to date but a large number of tabulations have been prepared which were formerly out of the question.

Among these were infant mortality rates for the State, counties and principal cities for the calendar years of 1920 and 1921. A tabulation of all deaths by causes for 1921 was another. Records are also available for deaths from all causes according to age, sex and color for the State and its principal sub-divisions for 1921.

The tables presented herewith are largely self explanatory. Additional information relative to these and other statistical matters may be readily obtained through correspondence with the division.

POPULATION AND REPORTED BIRTHS, STILLBIRTHS AND DEATHS—FISCAL YEAR JULY 1, 1921—JUNE 30, 1922, INCLUSIVE, BY COUNTIES AND CITIES OF 10,000 OR MORE INHABITANTS.

Counties and cities.	Estimated (revised) population January 1, 1922.	Births, number reported.	Stillbirths, number reported.	Deaths, number reported.
Adams.....	*62,188	1,190	48	924
Quincy.....	*35,978	780	35	553
Alexander.....	24,236	461	24	351
Cairo.....	15,339	237	17	263
Bond.....	*16,045	315	7	158
Boone.....	*15,322	231	15	175
Brown.....	9,336	178	10	115
Bureau.....	*42,048	829	24	413
Calhoun.....	8,245	176	1	90
Carroll.....	19,613	377	16	213
Cass.....	18,004	356	18	165
Champaign.....	58,015	1,211	33	592
Champaign.....	16,686	355	11	222
Urbana.....	10,656	186	6	65
Christian.....	39,254	871	31	437
Clark.....	*21,165	356	11	204
Clay.....	*17,684	421	15	194
Clinton.....	22,971	522	17	233
Coles.....	35,328	796	24	450
Mattoon.....	13,284	309	12	173
Cook.....	3,186,485	61,569	2,657	36,555
Beryon.....	15,862	215	7	130
Blue Island.....	12,180	228	13	202
Chicago.....	2,808,093	54,751	2,395	31,534
Chicago Heights.....	20,709	454	20	189
Cicero.....	61,287	718	23	328
Elgin (part of).....	***	**	*	**1
Evanston.....	39,758	1,174	39	453
Forest Park.....	11,628	100	6	109
Maywood.....	12,804	165	2	98
Oak Park.....	44,062	1,379	62	555
Crawford.....	*22,771	512	12	258
Cumberland.....	*12,858	251	8	146
DeKalb.....	*31,339	616	15	341
DeWitt.....	19,324	442	14	199
Douglas.....	19,872	432	10	197
DuPage.....	43,908	595	16	453
Edgar.....	*25,769	519	12	309
Edwards.....	*9,431	130	6	112
Effingham.....	*19,556	379	21	240
Fayette.....	*26,187	562	14	278
Ford.....	*16,466	323	14	161
Franklin.....	63,753	1,447	44	662
Fulton.....	*48,163	879	34	502
Canton.....	11,024	231	7	149
Gallatin.....	*12,856	305	4	130
Greene.....	22,991	501	14	270
Grundy.....	*18,580	375	11	166
Hamilton.....	*15,920	301	12	170
Hancock.....	*28,523	496	15	309
Hardin.....	7,641	149	4	77
Henderson.....	9,778	174	2	90
Henry.....	45,866	811	27	502
Kewanee.....	17,410	368	16	230

POPULATION AND REPORTED BIRTHS, STILLBIRTHS AND DEATHS—Continued.

Counties and cities.	Estimated (revised) population January 1, 1922.	Births, number, reported.	Stillbirths, number reported.	Deaths, number reported.
Iroquois.....	*34,841	762	19	350
Jackson.....	37,491	803	36	445
<i>Murphysboro</i>	11,367	337	15	149
Jasper.....	*16,064	350	12	148
Jefferson.....	*28,480	668	33	334
Jersey.....	*12,682	275	8	129
JoDavies.....	*21,917	380	8	257
Johnson.....	*12,022	240	9	144
Kane.....	101,071	1,953	70	1,496
<i>Aurora</i>	37,763	887	29	534
<i>Elgin (part of)</i>	27,765	538	23	**571
Kankakee.....	45,804	758	25	701
<i>Kankakee</i>	17,385	330	10	242
Kendall.....	*10,074	146	3	99
Knox.....	46,843	887	24	599
<i>Galesburg</i>	24,194	478	16	358
LaSalle.....	93,501	1,684	62	1,021
<i>LaSalle</i>	13,362	317	14	166
<i>Ottawa</i>	11,080	241	6	155
<i>Streator</i>	14,887	358	16	215
Lake.....	78,245	1,375	52	696
<i>Waukegan</i>	19,878	448	16	195
Lawrence.....	*21,380	573	22	238
Lee.....	*28,056	562	27	309
Livingston.....	*39,070	658	17	377
Logan.....	*29,562	506	15	359
<i>Lincoln</i>	12,068	222	9	235
McDonough.....	27,114	462	26	320
McHenry.....	33,300	534	12	341
McLean.....	70,539	1,427	50	908
<i>Bloomington</i>	29,335	632	28	450
Macon.....	67,439	1,464	46	791
<i>Decatur</i>	46,430	1,061	34	612
Macoupin.....	58,630	1,152	39	487
Madison.....	110,407	2,365	91	1,152
<i>Alton</i>	26,164	602	18	291
<i>Granite City</i>	16,767	332	25	145
Marion.....	37,993	886	33	462
<i>Centralia</i>	15,071	334	12	191
Marshall.....	*14,760	273	9	146
Mason.....	*16,634	308	9	185
Massac.....	*13,559	242	14	161
Menard.....	*11,694	255	5	131
Mercer.....	*18,800	371	8	185
Monroe.....	*12,839	251	5	114
Montgomery.....	42,659	884	39	573
Morgan.....	*33,567	691	20	635
<i>Jacksonville</i>	15,723	353	9	463
Moultrie.....	14,883	336	7	194
Ogle.....	*26,830	521	15	317
Peoria.....	114,070	1,787	104	1,549
<i>Peoria</i>	78,009	1,318	81	1,030
Perry.....	23,069	617	25	252
Piatt.....	*15,714	283	6	141
Pike.....	*26,866	564	15	335
Pope.....	*9,625	110	2	47
Pulaski.....	*14,629	235	10	197
Putnam.....	7,583	161	6	71
Randolph.....	*29,109	620	22	317
Richland.....	*14,044	310	5	209
Rock Island.....	96,809	1,582	56	1,024
<i>Moline</i>	32,082	689	30	293
<i>Rock Island</i>	37,409	489	13	372
St. Clair.....	139,944	2,680	125	1,500
<i>Belleville</i>	25,587	527	22	353
<i>East St. Louis</i>	68,459	1,270	72	700
Saline.....	40,033	765	45	411
Sangamon.....	102,166	2,062	77	1,266
<i>Springfield</i>	60,731	1,358	50	942
Schuyler.....	*13,285	264	4	120
Scott.....	*9,489	124	5	94
Shelby.....	*29,601	558	15	313
Stark.....	*9,693	192	6	92

POPULATION AND REPORTED BIRTHS, STILLBIRTHS AND DEATHS—Concluded.

Counties and cities.	Estimated (revised) population January 1, 1922.	Births, number reported.	Stillbirths, number reported.	Deaths, number reported.
Stephenson.....	37,931	726	34	450
Freeport.....	20,309	464	20	291
Tazewell.....	39,468	799	21	379
Pekin.....	12,425	276	9	153
Union.....	*20,249	438	14	454
Vermilion.....	37,846	1,809	67	1,217
Danville.....	34,992	787	37	512
Wabash.....	*14,034	271	4	138
Warren.....	*21,488	468	15	227
Washington.....	*18,035	370	8	203
Wayne.....	*22,772	427	17	230
White.....	*20,081	413	18	236
Whiteside.....	36,518	788	30	369
Will.....	94,671	1,837	53	1,056
Joliet.....	59,218	781	28	498
Williamson.....	64,388	1,678	67	783
Herrin.....	11,334	363	13	167
Winnebago.....	96,653	1,872	57	954
Rockford.....	69,823	1,576	47	723
Woodford.....	*19,340	401	7	169
Total (of Counties).....	6,659,704	130,286	5,070	76,418

* Population as of January 1, 1920; decrease between 1910 and 1920; no estimate made as of January 1, 1922.

** See Elgin in both Cook and Kane Counties.

*** See Elgin, Kane County.

DEATHS (EXCLUSIVE OF STILLBIRTHS) FROM EACH CAUSE (INTERNATIONAL LIST—THIRD DECENNIAL REVISION, OCTOBER 11-14, 1920) IN ILLINOIS, THE STATE EXCLUSIVE OF CHICAGO, AND THE CITY OF CHICAGO, CALENDAR YEAR OF 1921.

Cause number.	Title.	State total.	State exclusive of Chicago.	Chicago.
I. EPIDEMIC, ENDEMIC AND INFECTIOUS DISEASES.				
1 (a)	Typhoid fever.....	389	359	30
1 (b)	Paratyphoid fever.....	7	4	3
2	Typhus fever.....	.....	.....	.....
3	Relapsing fever (spirillum obermeieri).....	.....	.....	.....
4	Malta fever.....	2	2	.....
5	Malaria.....	84	83	1
6	Smallpox.....	26	22	4
7	Measles.....	311	194	127
8	Scarlet fever.....	390	213	177
9	Whooping cough.....	506	358	148
10	Diphtheria.....	1,472	794	678
11 (a)	Influenza with pulmonary complications specified.....	368	270	98
11 (b)	Influenza without pulmonary complications specified.....	227	211	16
12	Miliary fever.....	.....	.....	.....
13	Mumps.....	8	4	4
14	Asiatic cholera.....	.....	.....	.....
15	Cholera nostras.....	18	17	1
16 (a)	Dysentery, amebic.....	10	6	4
16 (b)	Dysentery, bacillary.....	26	25	1
16 (c)	Dysentery, unspecified or due to other causes.....	26	24	2
17 (a)	Plague, bubonic.....	.....	.....	.....
17 (b)	Plague, pneumonic.....	.....	.....	.....
17 (c)	Plague, septicemic.....	.....	.....	.....
17 (d)	Plague, unspecified.....	.....	.....	.....
18	Yellow fever.....	.....	.....	.....
19	Spirochetal hemorrhagic jaundice.....	.....	.....	.....
20	Leprosy.....	.....	.....	.....
21	Erysipelas.....	188	123	65
22	Acute poliomyelitis.....	149	118	31
23	Lethargic encephalitis.....	123	74	49

DEATHS FROM EACH CAUSE—YEAR OF 1921—Continued.

Cause number.	Title.	State total.	State exclusive of Chicago.	Chicago.
24	Meningococcus meningitis.....	75	44	31
25 (a)	Chickenpox.....	7	4	3
25 (b)	German measles.....			
25 (c)	Other epidemic and endemic diseases.....	2	1	1
26	Glanders.....			
27	Anthrax.....	2	1	1
28	Rabies.....	2	2	
29	Tetanus.....	65	47	18
30	Mycoses.....	3	3	
31	Tuberculosis of the respiratory system.....	4,853	2,883	1,970
32	Tuberculosis of the meninges and central nervous system.....	251	125	166
33	Tuberculosis of the intestines and peritoneum.....	195	136	60
34	Tuberculosis of the vertebral column.....	79	50	29
35	Tuberculosis of the joints.....	8	7	1
36 (a)	Tuberculosis of the skin and subcutaneous cellular tissue.....	16	7	9
36 (b)	Tuberculosis of the bones (vertebral column excepted).....	34	25	9
36 (c)	Tuberculosis of the lymphatic system (mesenteric and retroperitoneal glands excepted).....	17	8	9
36 (d)	Tuberculosis genitourinary system.....	33	21	12
36 (e)	Tuberculosis of organs other than the above.....	9	3	6
37 (a)	Disseminated tuberculosis, acute.....			47
37 (b)	Disseminated tuberculosis, chronic.....	11	4	7
38	Syphilis.....	487	278	209
39	Soft chancre.....			
40	Gonococcus infection.....	49	42	7
41	Purulent infection, septicemia.....	185	138	47
42	Other infectious diseases.....	4		4
II. GENERAL DISEASES NOT INCLUDED IN CLASS I.				
43	Cancer and other malignant tumors of the buccal cavity.....	256	161	95
44	Cancer and other malignant tumors of the stomach and liver.....	2,415	1,343	1,072
45	Cancer and other malignant tumors of the peritoneum, intestines and rectum.....	810	458	352
46	Cancer and other malignant tumors of the female genital organs.....	835	455	380
47	Cancer and other malignant tumors of the breast.....	426	238	188
48	Cancer and other malignant tumors of the skin.....	153	124	29
49	Cancer and other malignant tumors of other or unspecified organs.....	1,147	600	547
50	Benign tumors and tumors not returned as malignant (tumors of the female genital organs excepted).....	49	14	35
51	Acute rheumatic fever.....	252	140	112
52	Chronic rheumatism, osteoarthritis gout.....	233	94	139
53	Scurvy.....	8	2	6
54	Pellagra.....	9	6	3
55	Beriberi.....	2	2	
56	Rickets.....	119	11	108
57	Diabetes mellitus.....	1,160	625	535
58 (a)	Pernicious anemia.....	435	262	173
58 (b)	Other anemias and chlorosis.....	38	34	4
59	Diseases of the pituitary gland.....	5	3	2
60 (a)	Exophthalmic goiter.....	169	81	88
60 (b)	Other diseases of the thyroid gland.....	88	45	43
61	Diseases of the parathyroid glands.....	2		2
62	Diseases of the thymus gland.....	13	12	1
63	Diseases of the adrenals (Addison's disease).....	20	9	11
64	Diseases of the spleen.....	9	6	3
65 (a)	Leukemia.....	91	56	35
65 (b)	Hodgkin's disease.....	35	19	16
66	Alcoholism (acute or chronic).....	158	59	99
67 (a)	Chronic lead poisoning.....	14	9	5
67 (b)	Other chronic poisoning by mineral substances.....	4	1	3
68	Chronic poisoning by organic substances.....	8	3	5
69	Other general diseases.....	63	39	24
III. DISEASES OF THE NERVOUS SYSTEM AND OF THE ORGANS OF SPECIAL SENSE.				
70	Encephalitis.....	70	45	25
71 (a)	Simple meningitis.....	135	71	64
71 (b)	Non-epidemic cerebro spinal meningitis.....	28	21	7
72	Tabes dorsalis (locomotor ataxia).....	152	90	62
73	Other diseases of the spinal cord.....	356	283	73
74 (a)	Cerebral hemorrhage.....	4,798	3,190	1,608

DEATHS FROM EACH CAUSE—YEAR OF 1921—Continued.

Cause number.	Title.	State total.	State exclusive of Chicago.	Chicago.
74 (b).....	Cerebral thrombosis and embolism.....	187	187	10
75 (a).....	Hemiplegia.....	37	26	11
75 (b).....	Other paralysis without specified cause.....	36	29	7
76.....	General paralysis of the insane.....	507	484	23
77.....	Other forms of mental alienation.....	140	109	31
78.....	Epilepsy.....	217	152	65
79.....	Convulsions (non-puerperal) (5 years and over).....	3	2	1
80.....	Infantile convulsions (under 5 years of age).....	32	23	9
81.....	Chorea.....	19	1	18
82.....	Neuralgia and neuritis.....	19	15	4
85.....	Softening of the brain.....	48	36	12
84.....	Other diseases of the nervous system.....	160	113	47
85.....	Diseases of the eye and annexe.....	6	2	4
86 (a).....	Diseases of the ear.....	203	90	113
86 (b).....	Diseases of the mastoid process.....	64	31	33
IV. DISEASES OF THE CIRCULATORY SYSTEM.				
87.....	Pericarditis.....	63	33	30
88.....	Endocarditis and myocarditis (acute).....	267	197	70
89.....	Angina pectoris.....	560	366	194
90.....	Other diseases of the heart.....	9,341	4,905	4,436
91 (a).....	Aneurysm.....	102	53	49
91 (b).....	Arteriosclerosis.....	1,036	757	279
91 (c).....	Other diseases of the arteries.....	14	14	-----
92.....	Embolism and thrombosis (not cerebral).....	137	51	86
93.....	Diseases of the veins (varices, hemorrhoids, phlebitis, etc.).....	59	24	35
94.....	Diseases of the lymphatic system (lymphangitis, etc.).....	55	11	44
95.....	Hemorrhage without specified cause.....	12	12	-----
96.....	Other diseases of the circulatory system.....	8	2	6
V. DISEASES OF THE RESPIRATORY SYSTEM.				
97 (a).....	Diseases of the nasal fossae.....	13	4	9
97 (b).....	Other diseases of the nasal fossae and their annexe.....	17	16	1
98.....	Diseases of the larynx.....	75	59	16
99 (a).....	Bronchitis, acute.....	345	132	213
99 (b).....	Bronchitis, chronic.....	262	129	133
99 (c).....	Bronchitis not otherwise defined under 5 years of age.....	13	13	-----
99 (d).....	Bronchitis not otherwise defined 5 years and over.....	65	64	1
100 (a).....	Bronchopneumonia.....	2,351	1,262	1,089
100 (b).....	Capillary bronchitis.....	96	57	39
101 (a).....	Pneumonia, lobar.....	2,560	1,473	1,087
101 (b).....	Pneumonia not otherwise defined.....	33	32	1
102.....	Pleurisy.....	221	72	149
103.....	Congestion and hemorrhagic infarct of the lung.....	87	87	-----
104.....	Gangrene of the lung.....	7	3	4
105.....	Asthma.....	205	81	124
106.....	Pulmonary emphysema.....	21	5	16
107 (a).....	Chronic interstitial pneumonia, including occupational diseases of the lung.....	31	21	10
107 (b).....	Diseases of the mediastinum.....	1	-----	-----
107 (c).....	Other diseases of the respiratory system.....	39	26	13
VI. DISEASES OF THE DIGESTIVE SYSTEM.				
108.....	Diseases of the mouth and annexe.....	26	10	16
109 (a).....	Adenoid vegetations.....	4	4	-----
109 (b).....	Other diseases of the pharynx and tonsils.....	390	263	127
110.....	Diseases of the esophagus.....	9	4	5
111 (a).....	Ulcer of the stomach.....	278	153	125
111 (b).....	Ulcer of the duodenum.....	94	42	52
112.....	Other diseases of the stomach (cancer excepted).....	308	244	64
113.....	Diarrhea and enteritis (under 2 years of age).....	3,100	1,345	1,755
114.....	Diarrhea and enteritis (2 years and over).....	777	525	252
115.....	Ankylostomiasis.....	-----	-----	-----
116 (a).....	Cestodes (hydatids of the liver excepted).....	10	-----	10
116 (b).....	Trematodes.....	-----	-----	-----
116 (c).....	Nematodes (other than ankylostoma).....	2	2	-----
116 (d).....	Coccidia.....	4	-----	4
116 (e).....	Other parasites specified.....	2	1	1
116 (f).....	Parasites not specified.....	1,070	531	539
117.....	Appendicitis and typhilitis.....	249	125	124
118 (a).....	Hernia.....	446	249	197
118 (b).....	Intestinal obstruction.....	70	39	31
119.....	Other diseases of the intestines.....	-----	-----	-----

DEATHS FROM EACH CAUSE—YEAR OF 1921—Continued.

Cause number.	Title.	State total.	State exclusive of Chicago.	Chicago.
120	Acute yellow atrophy of the liver	29	15	14
121	Hydatid tumor of the liver	26	3	23
122 (a)	Cirrhosis of the liver, specified as alcoholic	44	9	35
122 (b)	Cirrhosis of the liver, not specified as alcoholic	407	238	169
123	Biliary calculi	369	218	151
124	Other diseases of the liver	323	198	125
125	Diseases of the pancreas	24	16	8
126	Peritonitis without specified cause	34	28	6
127	Other diseases of the digestive system (cancer and tuberculosis excepted)	38	11	27
VII. NON-VENERAL DISEASES OF THE GENITOURINARY SYSTEM AND ANNEXA.				
128	Acute nephritis (including unspecified under 10 years of age)	285	199	86
129	Chronic nephritis (including unspecified 10 years and over)	5,112	3,076	2,036
130	Chyluria	1	1	—
131	Other diseases of the kidneys and annexa (diseases of the kidneys in pregnancy excepted)	137	61	76
132	Calculi of the urinary passages	32	23	11
133	Diseases of the bladder	92	47	45
134 (a)	Stricture of the urethra	18	8	10
134 (b)	Other diseases of the urethra, urinary abscess, etc.	3	1	2
135	Diseases of the prostate	317	210	107
136	Non-venereal diseases of the male genital organs	12	4	8
137	Cysts and other benign tumors of the ovary	64	23	41
138	Salpingitis and pelvic abscess	133	37	96
139	Benign tumors of the uterus	163	63	100
140	Non-puerperal uterine hemorrhage	2	—	2
141	Other diseases of the female genital organs	55	22	33
142	Non-puerperal diseases of the breast (cancer excepted)	7	5	2
VIII. THE PUERPERAL STATE.				
143 (a)	Abortion	108	23	85
143 (b)	Ectopic gestation	48	26	22
143 (c)	Other accidents of pregnancy	28	13	15
144	Puerperal hemorrhage	73	46	27
145 (a)	Cesarean section	33	12	21
145 (b)	Other surgical operations and instrumental delivery	12	3	9
145 (c)	Other accidents of labor	53	34	19
146	Puerperal Septicemia	301	233	68
147	Puerperal phlegmasia alba dolens, embolus, sudden death	36	22	14
148	Puerperal albuminuria and convulsions	227	162	65
149	Following childbirth (not otherwise defined)	3	—	—
150	Puerperal diseases of the breast	1	—	—
IX. DISEASES OF THE SKIN AND OF THE CELLULAR TISSUE.				
151	Gangrene	81	67	14
152	Furuncle	71	31	40
153	Acute abscess	56	15	41
154	Other diseases of the skin and annexa	47	19	28
X. DISEASES OF THE BONES AND OF THE ORGANS OF LOCOMOTION.				
155	Diseases of the bones (tuberculosis excepted)	94	40	54
156	Diseases of the joints (tuberculosis and rheumatism excepted)	26	21	5
157	Amputations	—	—	—
158	Other diseases of the organs of locomotion	3	3	—
XI. MALFORMATIONS.				
159 (a)	Hydrocephalus	105	60	45
159 (b)	Congenital malformations of the heart	490	171	319
159 (c)	Other congenital malformations	311	153	158

DEATHS FROM EACH CAUSE—YEAR OF 1921—Concluded.

Cause number.	Title.	State total.	State exclusive of Chicago.	Chicago.
XII. EARLY INFANCY.				
160	Congenital debility, icterus and sclerema	517	310	207
161 (a)	Premature birth	2,645	1,697	948
161 (b)	Injury at birth	857	561	296
162	Other diseases peculiar to early infancy	487	163	324
163	Lack of care	16	9	7
XIII. OLD AGE.				
164	Senility	703	568	135
XIV. EXTERNAL CAUSES.				
165	Suicide by solid or liquid poisons (corrosive substances excepted)	32	26	6
166	Suicide by corrosive substances	112	60	52
167	Suicide by poisonous gas	190	30	160
168	Suicide by hanging or strangulation	166	105	61
169	Suicide by drowning	70	45	25
170	Suicide by firearms	315	189	116
171	Suicide by cutting or piercing instruments	50	30	20
172	Suicide by jumping from high places	21	8	13
173	Suicide by crushing	12	8	4
174	Other suicides	6	4	2
175	Poisoning by food	28	24	4
176	Poisoning by venomous animals	2	2	
177	Other acute accidental poisonings (gas excepted)	95	34	61
178	Conflagration	33	29	4
179	Accidental burns (conflagration excepted)	333	149	184
180	Accidental mechanical suffocation	47	31	16
181	Accidental absorption of irrespirable or poisonous gas	296	52	244
182	Accidental drowning	390	282	108
183	Accidental traumatism by firearms (wounds of war excepted)	161	113	48
184	Accidental traumatism by cutting or piercing instruments	24	4	20
185	Accidental traumatism by fall	727	452	275
186 (a)	Accidental traumatism in mines	209	209	
186 (b)	Accidental traumatism in quarries	6	5	1
187	Accidental traumatism by machines	88	52	36
188 (a)	Railroad accidents	537	416	121
188 (b)	Street car accidents	163	47	116
188 (c)	Automobile accidents	880	339	541
188 (d)	Aeroplane and balloon accidents	5	3	2
188 (e)	Injuries by other vehicles	124	74	50
188 (f)	Landslide, other crushing	50	24	26
189	Injuries by animals (not poisoning)	49	46	3
190	Wounds of war	6	2	4
191	Execution of civilians by belligerent armies			
192	Starvation (deprivation of food or water)	4	4	
193	Excessive cold	10	7	3
194	Excessive heat	104	78	26
195	Lightning	39	39	
196	Other accidental electric shocks	68	49	19
197	Homicide by firearms	414	205	209
198	Homicide by cutting or piercing instruments	60	21	39
199	Homicide by other means	122	44	78
200	Infanticide (Murder of infants less than one year of age)	1	1	
201	Fracture (cause not specified)	3	2	1
202	Other external violence (cause specified)	158	87	71
203	Other external violence (cause not specified)	6	5	1
XV. ILL-DEFINED DISEASES.				
204	Sudden death	16	16	
205 (a)	Ill-defined	43	42	1
205 (b)	Not specified or unknown	77	77	
Total deaths, all causes		73,505	42,687	30,818

SUMMARY OF DEATHS, YEAR OF 1921.

Total deaths by classes.	State total.	State, exclusive of Chicago.	Chicago.
Class I. (Epidemic and infectious diseases).....	10,804	6,719	4,085
Class II. (General diseases).....	9,026	4,909	4,117
Class III. (Diseases of nervous system).....	7,227	5,000	2,227
Class IV. (Diseases of circulatory system).....	11,654	6,425	5,229
Class V. (Diseases of respiratory system).....	6,442	3,536	2,906
Class VI. (Diseases of digestive system).....	8,133	4,273	3,860
Class VII. (Non-venereal, genitourinary system).....	6,435	3,780	2,655
Class VIII. (The puerperal state).....	923	576	347
Class IX. (Diseases of skin and cellular tissue).....	255	132	123
Class X. (Organs of locomotion).....	123	64	59
Class XI. (Malformation).....	906	384	522
Class XII. (Early infancy).....	4,522	2,740	1,782
Class XIII. (Old age).....	703	568	135
Class XIV. (External causes).....	6,216	3,446	2,770
Class XV. (Ill-defined diseases).....	136	135	1
Total deaths, all causes.....	73,505	42,687	30,818

MORTALITY RECORD OF ILLINOIS, DEATHS (EXCLUSIVE OF STILLBIRTHS) FROM COUNTIES, AND CITIES OF 10,000 POPULATION OR OVER.

Counties with cities of 10,000 population or over.	Estimated (revised) population as of Jan. 1, 1922, (mid-year).	Deaths—all causes.	Diseases of major sanitary importance.						
			Typhoid Fever.	Malaria.	Smallpox.	Measles.	Scarlet Fever.	Whooping Cough.	Diphtheria.
The State.....	6, 659, 704	††70, 435	337	69	26	142	261	264	1, 258
Adams County.....	*62, 188	924	3	1	—	—	2	—	8
Quincy.....	*35, 978	553	3	—	—	—	2	—	4
Alexander County.....	24, 236	351	5	6	—	—	—	2	3
Cairo.....	15, 539	253	3	2	—	—	—	—	—
Bond County.....	*16, 045	158	4	—	—	—	—	—	1
Boone County.....	*15, 322	175	—	—	—	—	—	1	1
Brown County.....	*9, 336	115	—	—	—	—	—	—	—
Bureau County.....	*42, 648	413	2	1	—	—	—	1	4
Calhoun County.....	*8, 245	80	—	—	—	—	—	—	—
Carroll County.....	19, 613	213	1	—	—	—	—	—	—
Cass County.....	18, 004	165	—	—	—	—	—	—	—
Champaign County.....	58, 015	592	6	—	—	—	1	2	—
Champaign.....	16, 585	222	2	—	—	—	1	1	—
Urbana.....	10, 656	85	—	—	—	—	—	—	—
Christian County.....	39, 254	437	1	—	—	—	3	3	4
Clark County.....	*21, 165	204	4	—	—	—	3	—	6
Clay County.....	*17, 684	184	—	—	—	—	—	—	5
Clinton County.....	22, 971	233	2	—	—	—	—	1	1
Coles County.....	35, 228	450	3	1	—	—	2	1	6
Mattoon.....	13, 984	173	1	1	—	—	1	—	6
Cook County.....	3, 186, 465	††36, 572	39	1	21	122	144	116	712
Berwyn.....	15, 862	150	—	—	—	—	—	—	4
Blue Island.....	12, 180	208	—	—	1	1	—	—	8
Chicago.....	2, 808, 093	††31, 651	35	1	19	117	138	99	628
Chicago Heights.....	80, 709	189	—	—	—	1	—	—	1
Cicero.....	61, 267	328	—	—	—	—	—	2	20
Elgin (part of).....	—	—	—	—	—	—	—	—	—
Evanston.....	39, 758	453	—	—	—	—	1	1	8
Forest Park.....	11, 628	108	—	—	—	1	—	—	5
Maywood.....	12, 964	95	—	—	—	—	—	—	2
Oak Park.....	44, 062	555	1	—	—	—	—	—	2
Crawford County.....	*22, 771	258	5	—	—	—	—	—	5
Cumberland County.....	*12, 858	146	1	—	—	—	2	1	—
DeKalb County.....	*31, 339	341	—	—	—	—	—	—	1
DeWitt County.....	19, 324	199	—	—	—	—	1	1	3
Douglas County.....	19, 872	197	1	1	—	—	—	—	2
DuPage County.....	43, 908	453	—	—	—	—	—	1	6
Edgar County.....	*25, 769	309	1	—	—	—	2	—	4
Edwards County.....	*9, 431	112	2	—	—	—	1	—	—
Effingham County.....	*19, 556	240	6	—	—	1	—	1	1
Fayette County.....	*26, 187	278	6	1	—	—	—	2	9
Ford County.....	*16, 466	161	—	—	—	—	—	1	1
Franklin County.....	63, 753	662	22	4	—	1	5	10	14
Fulton County.....	*48, 163	502	1	1	—	1	1	6	7
Canon.....	11, 024	145	1	—	—	—	—	—	1
Gallatin County.....	*12, 856	130	1	4	—	—	—	1	3
Greene County.....	22, 991	270	1	3	—	2	—	—	9
Grundy County.....	*18, 580	166	1	—	—	—	—	—	3
Hamilton County.....	*15, 920	170	7	—	—	—	—	2	7
Hancock County.....	*28, 523	309	3	—	—	1	—	—	1
Hardin County.....	7, 641	77	2	2	—	—	—	1	3
Henderson County.....	9, 778	90	—	1	—	—	—	—	2
Henry County.....	45, 866	502	6	—	—	—	2	—	1
Kewanee.....	17, 410	230	6	—	—	—	1	—	1
Iroquois County.....	*34, 841	350	2	—	—	—	2	—	4
Jackson County.....	37, 491	445	6	1	—	—	—	7	14
Murphysboro.....	11, 367	149	2	—	—	—	—	1	4
Jasper County.....	*16, 064	148	3	—	—	—	—	1	2
Jefferson County.....	*28, 480	334	9	—	—	—	—	—	10
Jersey County.....	*12, 682	129	1	—	—	—	—	—	2
JoDavies County.....	*21, 917	257	—	—	—	—	—	1	—
Johnson County.....	*12, 022	144	1	1	—	—	2	2	3

ALL CAUSES, AND FROM DISEASES OF MAJOR SANITARY IMPORTANCE, BY FISCAL YEAR, JULY 1, 1921—JUNE 30, 1922, INCLUSIVE.

Diseases of major sanitary importance.

Influenza.	Acute Anterior Polomyelitis (Infantile Paralysis).	Cerebro Spinal Fever (Epidemic Cerebro Spinal Meningitis).	Rabies (in man) Hydrophobia.	Pulmonary Tuberculosis.	Tuberculosis—other forms.	Syphilis.	Gonococcus Infection.	Pneumonia—all forms.	Septic Sore Throat.†
791	145	62	1	4,058	604	421	38	4,103	212
5		1		30	7	5	1	28	1
2				13	7	3		18	1
10				32	1	7	1	22	
8				28	1	6	1	18	
3	1			8	2			6	
2	1			7				9	
3				6	1			5	
4	2	1		10	2	1		16	1
				1				1	
3				4		2		4	1
5	1			8	2			2	1
3				13		2		20	3
2				4		1		4	1
				3				2	
4	2			16	1	2		20	2
1				9				9	1
3				5	1			4	
3				8	1			10	1
9	1			20	5		1	11	2
				6	1			5	
284	40	36		2,344	364	222	9	2,602	74
1				7		1		11	
				6	1			12	2
289	33	32		1,968	336	208	8	2,432	66
3	1			4	1	1		17	1
6				11	2			16	2
..
				11	6	1	1	14	2
1	1			2				1	
				6	1			9	
	2	1		8	2	1		11	2
1				14	1	1		7	1
2	1			7		2		2	1
1				11	1	1		9	
2				3	1	1		7	
	1			4	1			9	1
4	2			21	4	1		17	1
9				15	2	3		3	
2	1			5				2	1
3	1			12		1		5	
2				12	2	1		9	2
1	1			2			1	4	1
12	2			31	5	2		37	1
4	3			16	3	3		14	6
2	1			4	1	1		5	1
				4	1			4	
1				11	2	1	1	9	1
1				3	2			6	
2	1			9	3			5	
				8	2			12	
				1	2			2	
2				3				4	
4	1	1		16	2	1		21	2
2	1			11	2			14	1
5				9	2	1		12	3
10	1			32	4	1	2	6	4
1	1			11	2			2	2
2				5	2			3	
4		2		29	4	3		19	
1				1	1			4	
2				4	1	2		11	1
5				6				3	

MORTALITY RECORD OF ILLINOIS, DEATHS

Counties with cities of 10,000 population or over.	Estimated (revised) popula- tion as of Jan. 1, 1922, (mid-year).	Deaths—all causes.	Diseases of major sanitary importance.						
			Typhoid Fever.	Malaria.	Smallpox.	Measles.	Scarlet Fever.	Whooping Cough.	Diphtheria.
Kane County.....	101,071	1,496	12			4	2	2	13
Aurora.....	37,753	534	6			3	1	1	10
Elgin (part of).....	27,758	571	1				1		2
Kankakee County.....	45,804	701	5				1	2	4
Kankakee.....	17,325	242						2	1
Kendall County.....	*10,074	99	1						
Knox County.....	46,843	599				1	1	2	6
Galesburg.....	24,194	358				1			2
LaSalle County.....	93,501	1,021	4				2	1	20
LaSalle.....	13,362	166							3
Otto.....	11,080	155					2		5
Streator.....	14,887	215							4
Lake County.....	78,245	696	2			1	3	1	18
Waukegan.....	19,878	195				1		1	12
Lawrence County.....	*21,380	238	3						15
Lee County.....	28,056	309	1			1	1		1
Livingston County.....	*39,070	377	3				1		1
Logan County.....	*29,562	359					3	2	2
Lincoln.....	12,086	255					3	1	2
McDonough County.....	27,114	320	2						1
McHenry County.....	33,300	341	1					1	2
McLean County.....	70,539	908	1			1			7
Bloomington.....	29,333	450	1						3
Macon County.....	67,439	791	7					2	16
Decatur.....	46,450	612	6					2	12
Macoupin County.....	58,630	487	1					10	2
Madison County.....	110,407	1,152	3	3	3		2	4	22
Alton.....	26,154	291	2					1	4
Granite City.....	15,757	145		2					5
Marion County.....	37,993	462	7						6
Centralia.....	13,071	181	2				1		1
Marshall County.....	*14,760	146							2
Mason County.....	*16,634	185	1				1		1
Massac County.....	*13,559	161	1	2				2	4
Menard County.....	*11,694	131		1				2	1
Mercer County.....	*18,800	185	2						
Monroe County.....	*12,839	114						1	1
Montgomery County.....	42,659	573	5	1				2	3
Morgan County.....	*33,567	635	1			1			1
Jacksonville.....	16,795	468				1			1
Moultrie County.....	14,883	194	4						1
Ogle County.....	26,830	317	2				1		5
Peoria County.....	114,070	1,540	3		1		8	2	18
Peoria.....	78,009	1,030	1				6	1	11
Perry County.....	23,060	252	1					1	3
Piatt County.....	*15,714	141	1						2
Pike County.....	*26,866	335				1			8
Pope County.....	*9,625	47	4						7
Pulaski County.....	*14,629	197	1	3					1
Putnam County.....	7,583	71							1
Randolph County.....	*29,109	317	8						4
Richland County.....	*14,044	209	2						
Rock Island County.....	96,809	1,024		1		1	1	1	8
Moline.....	32,082	293				1		1	1
Rock Island.....	57,409	372							3
St. Clair County.....	139,944	1,500	15	4		1	1	5	17
Belleville.....	25,587	333	5	1					2
East St. Louis.....	68,459	700	3	2		1	1	3	11
Saline County.....	40,033	411	8	3			2	16	23
Sangamon County.....	102,166	1,266	6	1	1	1	4	5	12
Springfield.....	60,751	842	6	1			4	6	7
Schuyler County.....	*13,285	120					1	1	
Scott County.....	*9,489	94							
Shelby County.....	*29,601	313	1				1	1	1
Stark County.....	*9,693	92							1

EXCLUSIVE OF STILLBIRTHS—Concluded.

Diseases of major sanitary importance.

Influenza.	Acute Anterior Polio-myelitis (Infantile Paralysis).	Cerebro Spinal Fever (Epidemic Cerebro Spinal Meningitis).	Rabies (in man) Hydrophobia.	Pulmonary Tuberculosis.	Tuberculosis—other forms.	Syphilis.	Gonococcus Infection.	Pneumonia—all forms.	Septic Sore Throat. †
8				11	1	3	1	14	
6				8		2	1	9	
10	1			20	1	4		18	2
4	1			9		3		4	
9				33	1	2		8	1
13		2		48	9	11	1	44	3
6				25	5	10	1	23	2
3	4			2				3	
3				8	1			8	1
				6	3			7	2
10				5				10	
				17	1			6	
	4			12	1	1		15	
20	3			59	11	3		37	5
8	3			19	5			19	3
11	1	1		39	5	1		27	5
	1			5	1			3	
3	2			37	10	6		41	4
5	1			24	6	5		28	3
3		2		2				5	
791	145	62	1	4,058	604	421	38	4,103	212

MORTALITY FROM ALL PUERPERAL CAUSES—ILLINOIS—Concluded.

Area.	Estimated population (mid-year) July 1st.	Reported births.	Reported stillbirths.	Total reported births and stillbirths.	Deaths from all puerperal causes.										Total.		
					143 (a)	143 (b)	143 (c)	144	145 (a)	145 (b)	145 (c)	146	147	148		149	150
McDonough.....	27,104	483	25	508	1	1	1	1	1	1	1	1	1	1	1	2	5
McHenry.....	33,266	546	9	555	1	1	1	1	1	1	1	1	1	1	1	1	5
McLean.....	70,431	1,315	50	1,365	1	1	1	1	1	1	1	1	1	1	1	1	5
Bloomington.....	26,181	495	22	517	1	1	1	1	1	1	1	1	1	1	1	1	8
Macon.....	66,873	1,566	37	1,603	1	1	1	1	1	1	1	1	1	1	1	1	5
Decatur.....	45,777	1,124	37	1,161	1	1	1	1	1	1	1	1	1	1	1	1	4
Macoupin.....	58,291	1,150	34	1,184	1	1	1	1	1	1	1	1	1	1	1	1	4
Madison.....	109,529	2,446	101	2,547	1	1	1	1	1	1	1	1	1	1	1	1	19
Alton.....	26,786	659	26	685	1	1	1	1	1	1	1	1	1	1	1	1	7
Granite City.....	15,607	351	21	372	1	1	1	1	1	1	1	1	1	1	1	1	6
Marion.....	37,869	842	38	880	2	2	2	2	2	2	2	2	2	2	2	2	5
Centralia.....	14,948	308	15	323	1	1	1	1	1	1	1	1	1	1	1	1	5
Marshall.....	14,780	279	12	291	1	1	1	1	1	1	1	1	1	1	1	1	1
Mason.....	16,634	310	10	320	1	1	1	1	1	1	1	1	1	1	1	1	2
Massac.....	13,559	242	21	263	1	1	1	1	1	1	1	1	1	1	1	1	1
Menard.....	11,694	258	7	265	1	1	1	1	1	1	1	1	1	1	1	1	1
Mercer.....	18,800	406	9	415	1	1	1	1	1	1	1	1	1	1	1	1	3
Monroe.....	42,345	897	34	931	1	1	1	1	1	1	1	1	1	1	1	1	2
Montgomery.....	33,567	641	23	664	1	1	1	1	1	1	1	1	1	1	1	1	19
Morgan.....	16,773	296	14	310	1	1	1	1	1	1	1	1	1	1	1	1	7
Jacksonville.....	14,872	330	9	339	1	1	1	1	1	1	1	1	1	1	1	1	6
Moultrie.....	26,830	459	12	471	1	1	1	1	1	1	1	1	1	1	1	1	3
Ogle.....	113,490	1,815	99	1,914	2	2	2	2	2	2	2	2	2	2	2	2	18
Peoria.....	77,637	1,322	81	1,403	2	2	2	2	2	2	2	2	2	2	2	2	17
Perry.....	23,027	587	26	613	1	1	1	1	1	1	1	1	1	1	1	1	4
Pike.....	15,714	312	5	317	1	1	1	1	1	1	1	1	1	1	1	1	2
Pope.....	9,625	88	21	538	1	1	1	1	1	1	1	1	1	1	1	1	3
Pulaski.....	14,623	205	14	219	1	1	1	1	1	1	1	1	1	1	1	1	4
Putnam.....	7,582	146	12	148	1	1	1	1	1	1	1	1	1	1	1	1	3
Randolph.....	23,009	624	25	649	1	1	1	1	1	1	1	1	1	1	1	1	10
Richard.....	14,044	282	7	290	1	1	1	1	1	1	1	1	1	1	1	1	7
Rock Island.....	85,681	1,647	71	1,718	1	1	1	1	1	1	1	1	1	1	1	1	7
Rock Island.....	21,875	494	21	515	1	1	1	1	1	1	1	1	1	1	1	1	7
Rock Island.....	130,088	2,708	146	2,854	3	3	3	3	3	3	3	3	3	3	3	3	32
St. Clair.....	26,598	510	28	538	1	1	1	1	1	1	1	1	1	1	1	1	6
Belleville.....	26,598	510	28	538	1	1	1	1	1	1	1	1	1	1	1	1	7
East St. Louis.....	1,361	1,361	85	1,446	1	1	1	1	1	1	1	1	1	1	1	1	2
Saline.....	39,613	642	32	674	1	1	1	1	1	1	1	1	1	1	1	1	5

Sangamon.....	101,690	2,089	66	2,135	1	2	1	1	2	11	2	3	3	22
Springfield.....	60,844	1,560	48	1,592	1	2	1	1	1	10	2	3	3	20
Schuyler.....	13,285	280	7	287										1
Scott.....	9,489	131	3	134										3
Shelby.....	28,601	604	17	621						1		2		1
Stark.....	9,693	198	8	206					1					3
Stephenson.....	37,884	738	44	782								2		3
Freeport.....	20,149	485	35	518				1				2		5
Tazewell.....	39,236	791	21	812				1				2		5
Pekin.....	12,312	266	15	279								2		3
Union.....	20,249	395	14	410										3
Vermilion.....	87,425	1,817	66	1,883	1			1				1		25
Deerfield.....	54,688	787	32	819	1			1				2		19
Wabash.....	14,034	248	9	257					2			2		1
Warren.....	21,438	374	13	389								1		3
Washington.....	18,055	308	10	314										1
Wayne.....	27,172	485	19	493					2			1		5
White.....	20,081	411	21	432	1									2
White..	30,432	788	28	816										8
Willard.....	90,237	1,798	48	1,856		1						2		9
Williamson.....	90,091	1,797	47	1,827					1			2		9
Williamson.....	63,544	1,588	37	1,635				3				3		16
Willard.....	11,692	1,588	76	1,665					1			1		6
Willard.....	95,222	1,927	58	1,985								2		10
Rockford.....	68,740	1,535	53	1,617				1				2		7
Woodford.....	19,340	435	9	444								1		2
State total.....	66,616,098	131,289	5,375	136,664	108	48	28	73	33	12	53	36	227	923
City total only.....	3,925,375	80,704	3,588	84,382	93	33	18	42	26	11	32	23	134	574

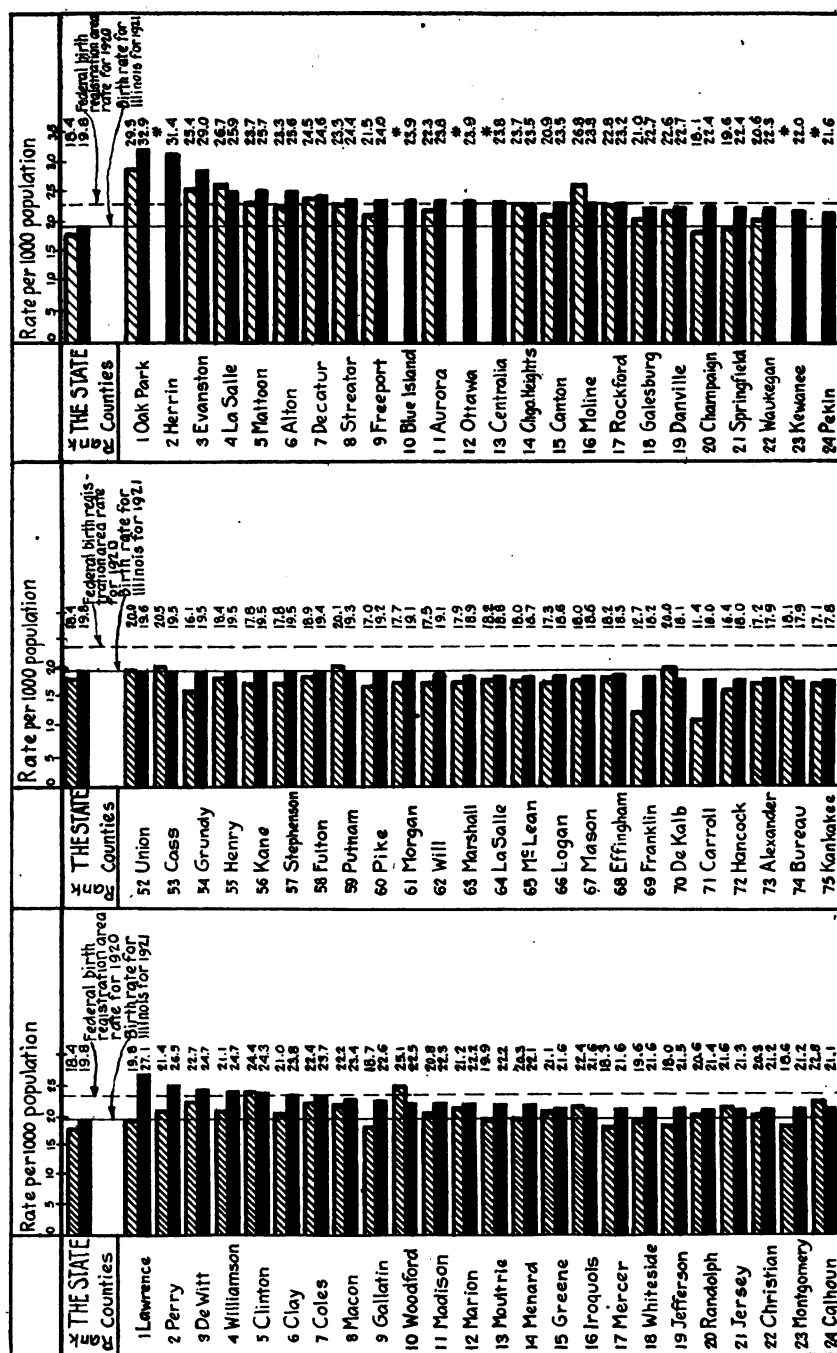
* Population, January 1, 1920. Decrease between 1910 and 1920; no estimate made.

** Estimated population as of mid-year July 1, 1921

STATISTICS OF BIRTHS AND DEATHS (EXCLUSIVE OF STILLBIRTHS) FOR ILLINOIS WITH RATES PER 1,000 POPULATION, THE CALENDAR YEARS OF 1916, 1917, 1918, 1919, 1920 AND 1921.

Area.	The State Total.						Chicago.						State exclusive of Chicago.					
	Population estimated * (revised) as of July 1, (mid-year).	Reported births.	Birth rate per 1,000 population.	Reported deaths.	Death rate per 1,000 population.		Population estimated * (revised) as of July 1, (mid-year).	Reported births.	Birth rate per 1,000 population.	Reported deaths.	Death rate per 1,000 population.		Population estimated * (revised) as of July 1, (mid-year).	Reported births.	Birth rate per 1,000 population.	Reported deaths.	Death rate per 1,000 population.	
1921	6,616,098	131,289	19.8	73,204	11.1		2,781,496	56,543	20.3	30,819	11.1		3,834,602	74,746	19.5	42,385	11.1	
1920	6,538,886	128,992	19.8	82,132	12.6		2,728,302	54,879	20.1	34,841	12.8		3,800,584	74,113	19.5	47,291	12.4	
1919	6,441,674	115,072	17.9	77,528	12.0		2,675,608	47,460	17.7	33,494	12.5		3,766,566	67,612	18.0	44,034	11.7	
1918	6,354,462	118,368	18.6	103,128	16.2		2,621,914	51,020	19.5	44,065	17.0		3,732,548	67,348	18.0	58,533	15.7	
1917	6,267,250	108,901	17.4	86,231	13.8		2,568,720	46,561	19.3	38,005	14.8		3,698,530	59,340	16.0	48,176	13.0	
1916	6,180,038	116,283	18.8	81,345	13.2		2,515,526	49,754	19.8	36,304	14.4		3,664,512	66,529	18.2	45,041	12.3	

* Revised estimates, based on the United States Censuses April 15, 1910 and January 1, 1920.



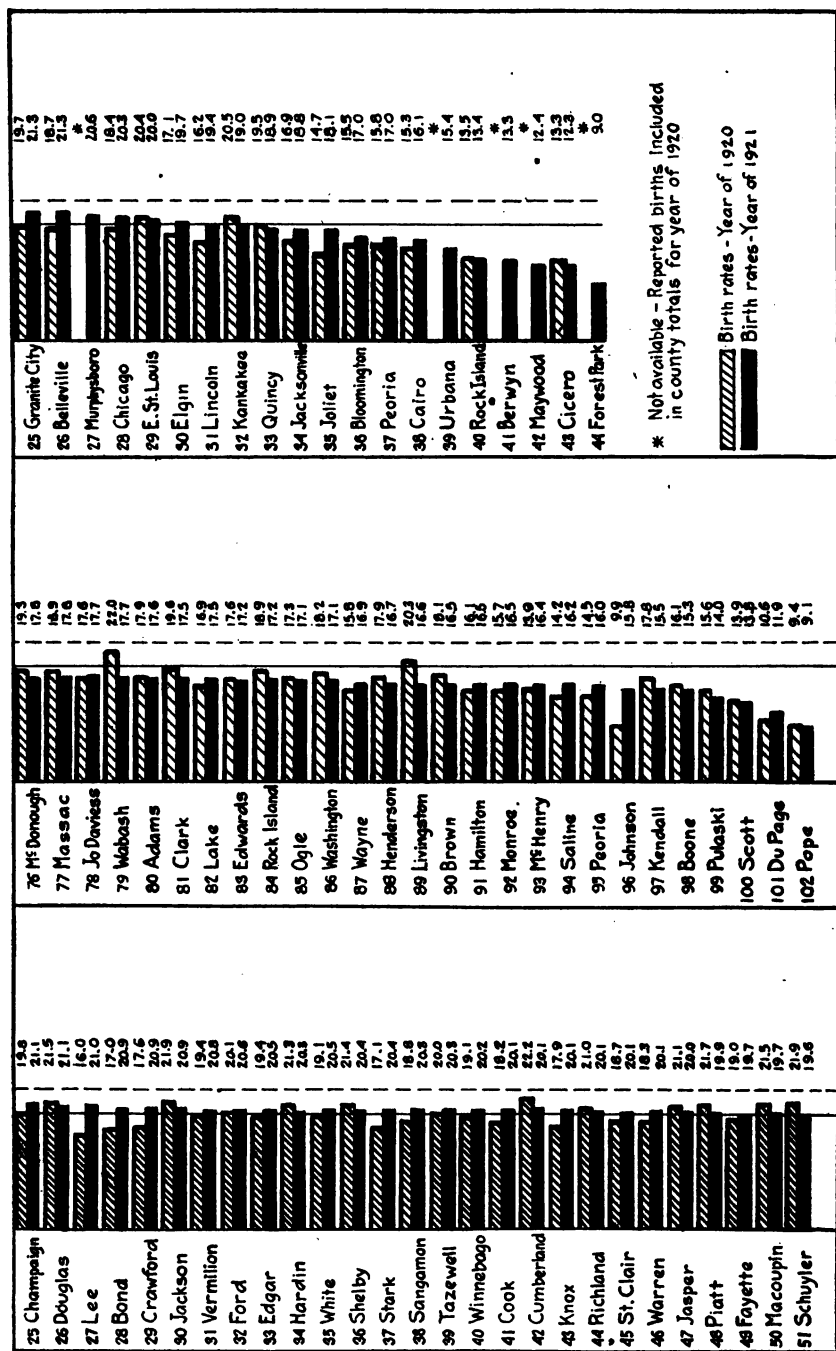


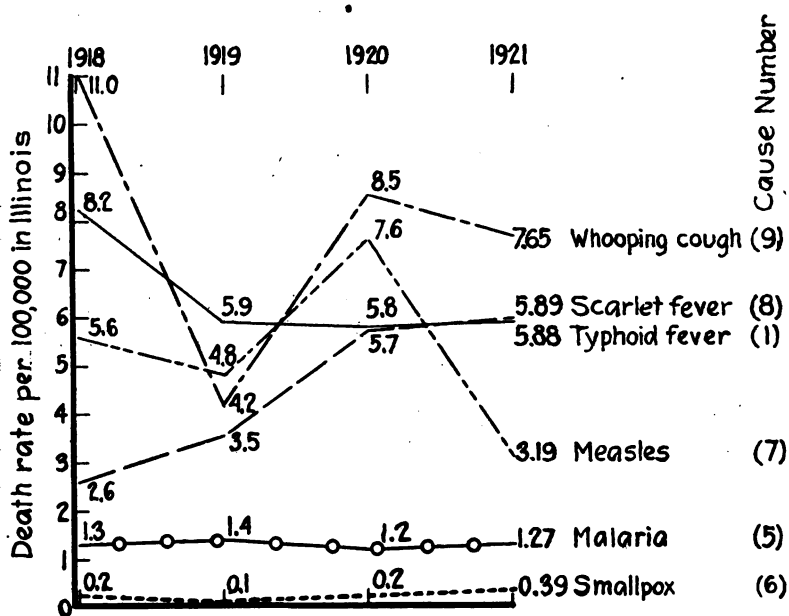
Figure 39.

S.L.H.-E.R.E.-B.S.I.

**STATE OF ILLINOIS
DEPARTMENT OF PUBLIC HEALTH
DIVISION OF VITAL STATISTICS**

**COMPARATIVE DEATH RATES FROM CERTAIN DISEASES
PER 100,000 POPULATION**

1918 to 1921 inclusive



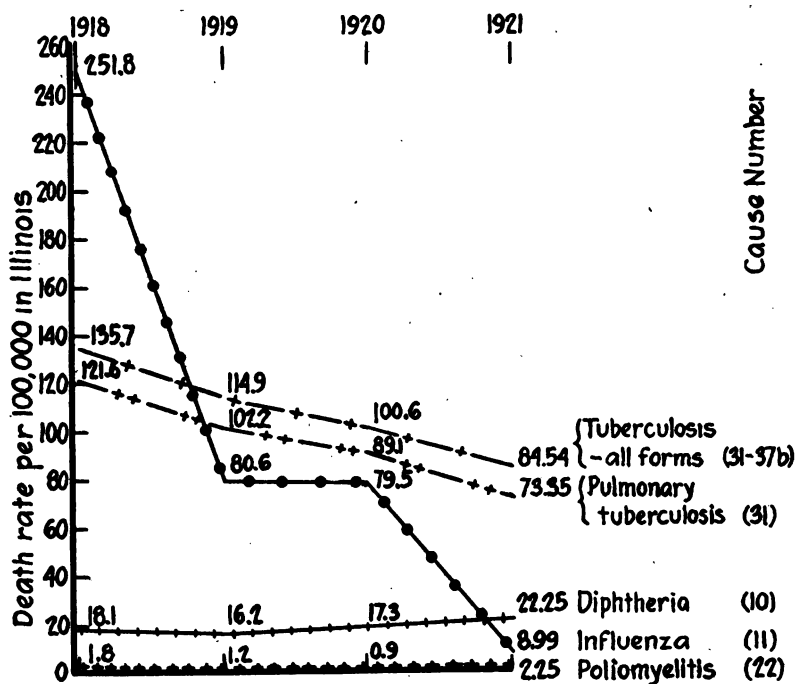
FEDERAL REG. AREA

12.6	9.2	7.8	* Typhoid fever (1)
3.1	3.8	3.6	* Malaria (5)
0.4	0.4	0.6	* Smallpox (6)
10.8	3.9	8.8	* Measles (7)
3.0	2.8	4.6	* Scarlet fever (8)
16.9	5.5	12.5	* Whooping cough (9)

* Not yet published

Figure 40.

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC HEALTH
DIVISION OF VITAL STATISTICS
COMPARATIVE DEATH RATES FROM CERTAIN DISEASES
PER 100,000 POPULATION
1918 to 1921 Inclusive



FEDERAL REG. AREA

13.9	14.9	15.3	* Diphtheria (10)
300.8	98.8	71.0	* Influenza (11)
1.2	0.9	0.9	* Poliomyelitis (22)
133.2	111.3	100.8	* Pulmonary tuberculosis (31)
150.0	125.6	114.2	* Tuberculosis - all forms (31-37b)

* Not yet published

Figure 41.

U. S. Reg. Area... 80.1
 State of Illinois.. 88.8

Franklin	184.9
Pulaski	182.6
Saline	135.3
Henderson	112.6
Scott	110.2
Edwards	109.8
Williamson	109.7
Alexander	107.9
Massac	106.2
Jefferson	104.2
Cook	99.2
Fayette	96.8
White	96.
Perry	94.4
Jackson	94.3
Wayne	93.2
Will	92.7
Wabash	92.4
Peoria	91.3
Calhoun	90.9
Vermillion	88.7
Whiteside	88.5
Carroll	88.2
St. Clair.....	88.
Marion	87.6
Coles	86.7
McHenry	85.8
Edgar	84.3
Christian	84.
Grundy	84.
Sangamon	83.8
Pike	83.1
Madison	82.9
Lake	82.8
LaSalle	82.8
Morgan	82.8
Montgomery	81.5
Kankakee	81.4
DuPage	80.6
DeWitt	79.7
Cass	79.4
Pope	78.3
Crawford	78.1
Gallatin	77.2
Johnson	77.2
Union	76.4
Lee	75.5
Henry	75.4

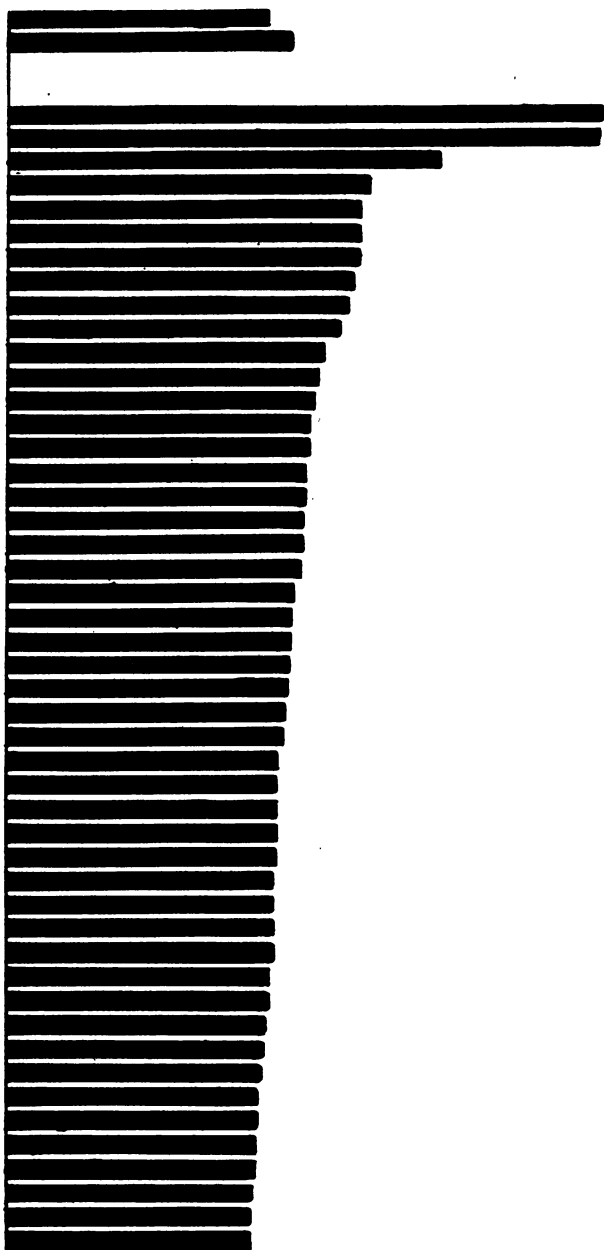


Figure 42.—Average number of deaths under one year of age per 100,000 live births in counties of Illinois for the two years 1920 and 1921.

Fulton	75.3
McLean	75.1
Bureau	74.9
Ogle	74.7
Ford	74.6
Effingham	74.4
Hamilton	73.9
Greene	73.4
Clinton	73.2
Lawrence	72.6
Rock Island	72.5
Champaign	72.2
Marshall	71.9
Washington	70.4
Shelby	70.3
Macoupin	70.1
Jersey	69.9
Boone	69.7
Kane	69.6
Platt	69.2
JoDavless	68.6
McDonough	68.6
Logan	67.4
Winnebago	66.7
Livingston	66.2
Richland	66.
Douglas	65.5
Stephenson	65.4
Macon	65.
Clay	64.8
Iroquois	64.7
Warren	64.6
Randolph	64.5
Cumberland	64.
Kendall	63.6
Moultrie	63.4
Woodford	63.2
Knox	62.6
Tazewell	62.6
Hancock	60.2
Adams	58.6
Mercer	56.1
Jasper	54.8
Bond	54.6
Menard	53.9
DeKalb	53.7
Schuyler	51.6
Clark	50.5
Putnam	50.5
Mason	49.1
Monroe	48.5
Brown	48.3
Stark	48.3
Hardin	44.3



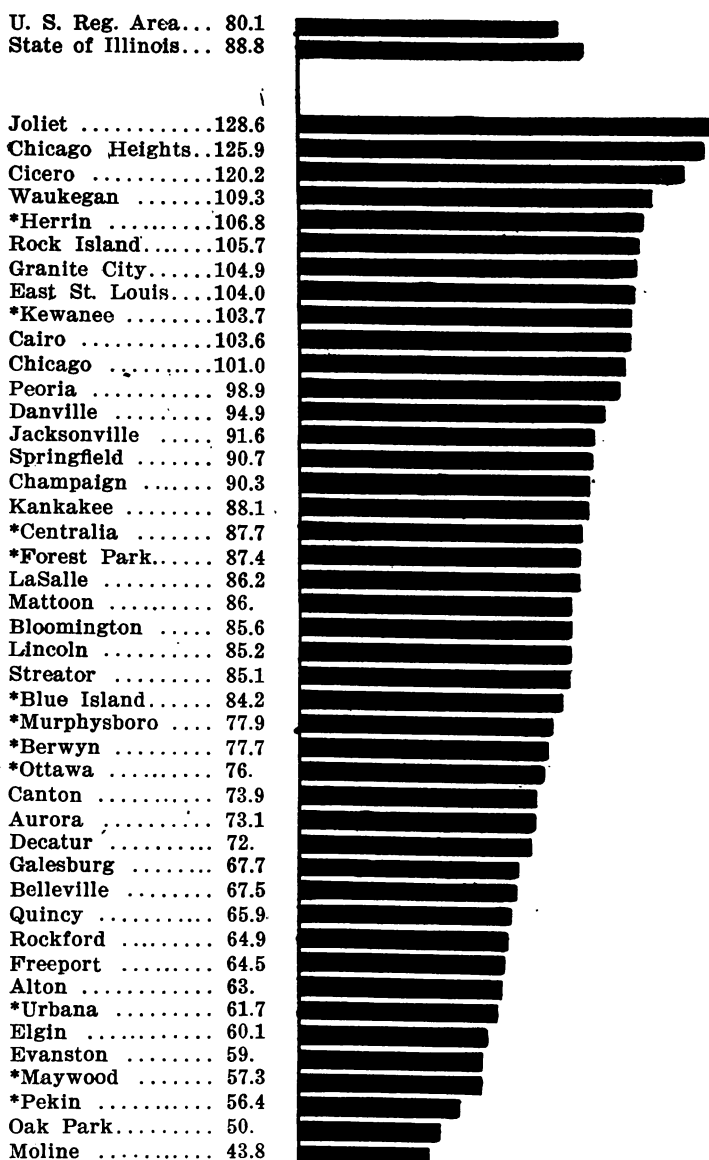


Figure 43.—Average number of deaths under one year of age per 100,000 live births in principal cities of Illinois for two years, 1920, 1921.

*Figures for one year only.

BIRTH AND INFANT DEATH RATES—CALENDAR YEAR 1921.

Area. By counties and principal cities.	Births and rate.			Deaths of infants under 1 year of age (exclusive of stillbirths) and death rate per 1,000 live births reported.											
	Population.	Reported.		Probable actual number.	Less than 1 day.	Less than 1 week.	Less than 1 month.	Less than 2 months.	Less than 3 months.	3-5 months.	6-8 months.	9-11 months.	Total under 1 year.	Rate per 1,000 Reported live births.	Estimated rate.
		Reported.	Rate per 1,000 population.												
Adams.....	62,188	1,098	17.6	1,474	19	12	11	3	4	4	7	2	60	54.6	40.7
Quincy.....	25,878	679	18.9	858	16	7	6	6	7	7	5	2	42	61.9	49.2
Alexander.....	24,172	432	17.9	573	7	4	5	3	7	7	5	2	39	90.3	68.1
Carro.....	16,742	247	16.1	263	7	4	6	3	7	5	5	2	29	105.2	71.6
Bond.....	15,905	335	20.9	380	7	4	3	3	3	1	1	1	17	50.7	44.7
Boone.....	9,332	231	15.1	363	2	1	3	1	1	2	2	1	10	43.3	27.5
Brown.....	9,336	154	16.5	221	3	3	1	1	1	1	1	1	13	84.4	58.8
Bureau.....	42,648	762	17.9	1,011	10	9	8	7	3	3	3	6	49	64.3	48.5
Calhoun.....	8,245	174	21.1	195	2	3	2	2	3	2	3	1	15	86.2	76.9
Carroll.....	19,548	351	18.0	463	8	5	3	5	1	2	4	1	24	68.4	51.8
Cass.....	17,977	350	19.5	428	20	10	11	6	2	16	3	5	73	59.8	53.3
Champaign.....	57,751	1,221	21.1	1,369	9	5	5	1	2	16	3	5	48	77.1	63.4
Urbana.....	16,407	268	16.4	260	9	5	7	5	1	4	1	1	27	77.1	63.4
Christian.....	10,653	829	21.2	926	17	21	10	2	4	15	3	8	79	95.3	85.3
Clark.....	39,055	829	21.2	926	5	3	2	2	1	2	2	1	16	43.1	31.9
Clay.....	21,165	371	17.5	502	17	21	10	2	4	15	3	8	79	95.3	85.3
Cole.....	22,965	558	24.3	502	6	4	5	3	1	2	2	1	16	43.1	31.9
Clinton.....	35,198	833	23.7	833	13	7	3	2	1	2	2	4	39	89.9	69.9
Coles.....	13,878	356	25.7	356	8	20	6	5	9	14	7	6	75	90.0	69.0
Mattoon.....	13,878	356	25.7	356	8	20	6	5	9	14	7	6	75	90.0	69.0
Cook.....	3,153,103	63,327	20.1	74,726	908	985	183	126	130	176	150	136	5,579	88.1	74.7
Beryn.....	15,434	808	18.3	966	6	4	5	2	3	4	2	2	16	77.7	43.7
Blue Island.....	11,946	285	23.9	285	6	5	3	2	3	4	2	2	24	84.2	64.2
Chicago.....	2,781,496	56,545	20.3	65,981	790	877	6	5	5	10	9	4	63	89.3	76.6
Chicago Heights.....	20,445	481	23.6	486	6	8	6	3	3	3	4	4	63	110.2	109.3
Cicero.....	49,689	610	12.3	1,179	10	18	18	6	4	13	6	18	73	119.7	61.9
Evanston.....	39,187	1,156	29.0	900	24	17	3	5	3	5	5	1	68	73	64.6
Forest Park.....	11,415	103	9.0	270	1	2	2	1	1	1	1	1	9	87.4	53.5
Maywood.....	13,686	157	12.4	301	1	1	1	1	1	1	1	1	9	87.4	53.5
Oak Park.....	43,011	1,415	32.9	1,415	25	23	12	1	1	1	1	2	65	145.9	85.9

BIRTH AND INFANT DEATH RATES—CALENDAR YEAR 1921—Continued.

Area. By counties and principal cities.	Births and rate.			Deaths of infants under 1 year of age (exclusive of stillbirths) and death rate per 1,000 live births reported.											
	Population.	Births and rate.		Less than 1 day.	Less than 1 week.	Less than 1 month.	Less than 2 months.	Less than 3 months.	3-5 months.	6-8 months.	9-11 months.	Total under 1 year.	Rate per 1,000 Reported live births.	Estimated rate.	
		Reported.	Probable actual number.												
Crawford.....	22,771	475	20.9	540	10	4	7	5	2	2	4	1	35	73.7	64.8
Cumberland.....	12,858	258	20.1	305	13	2	2	3	1	5	2	1	15	58.1	49.2
DeKalb.....	31,339	568	18.1	743	4	9	8	4	2	3	1	4	33	58.1	44.4
DeWitt.....	19,306	477	24.7	.....	6	6	6	4	3	3	6	4	28	81.8	59.7
Douglas.....	19,805	418	21.1	469	14	8	7	6	3	2	3	5	39	87.0	75.1
DuPage.....	43,461	519	11.9	1,030	14	3	3	4	1	1	1	1	50	75.1	64.7
Edgar.....	25,769	628	20.5	611	14	3	3	4	1	3	2	2	19	117.3	81.2
Edward.....	9,431	162	17.2	234	4	3	3	4	1	2	4	8	21	68.7	45.4
Effingham.....	19,556	358	18.3	463	6	6	5	1	1	2	2	2	43	83.3	69.2
Fayette.....	26,187	516	19.7	621	8	9	5	1	1	3	2	2	14	41.3	35.9
Ford.....	16,466	339	20.6	390	4	4	1	1	1	18	2	5	157	138.8	106.6
Franklin.....	62,138	1,131	18.2	1,473	43	23	19	20	11	3	13	6	74	76.1	64.9
Fulton.....	48,163	936	19.4	1,141	19	7	14	3	3	9	6	2	19	73.6	72.8
Canton.....	11,000	228	20.7	261	6	4	4	4	1	2	5	2	22	75.6	72.1
Gallatin.....	12,856	201	22.6	305	2	4	4	4	1	2	2	1	37	74.6	68.0
Greene.....	22,964	496	21.6	544	10	5	7	2	2	2	2	10	27	74.4	61.4
Grundy.....	18,580	363	19.5	440	1	1	1	2	2	2	2	2	17	64.6	45.1
Hamilton.....	15,920	263	16.5	377	5	2	3	2	1	1	1	3	30	58.4	44.4
Hancock.....	28,523	514	18.0	676	8	10	3	2	2	2	2	1	8	61.3	44.4
Hardin.....	7,614	156	20.5	180	1	1	2	1	1	2	1	1	8	61.3	44.4
Henderson.....	9,776	163	16.7	232	4	6	2	2	1	2	1	2	19	116.6	81.9
Henry.....	45,890	892	19.5	1,083	17	14	6	5	5	6	7	6	66	74.0	60.9
Kewanee.....	17,064	376	22.0	404	11	9	6	5	2	8	6	6	59	105.7	86.5
Iroquois.....	34,841	752	21.6	828	20	13	4	3	1	1	1	1	63	70.5	64.2
Jackson.....	37,391	763	20.9	886	18	8	10	5	3	3	6	3	63	80.5	71.1
Murphysboro.....	11,401	231	20.6	265	4	2	7	1	1	3	1	2	18	77.9	67.9
Jasper.....	16,064	321	20.0	381	8	8	10	6	3	8	1	2	21	65.4	56.1
Jefferson.....	28,480	612	21.5	675	6	10	9	3	1	1	1	2	56	91.5	83.0
Jersey.....	12,982	270	21.3	301	7	6	3	2	1	1	1	1	21	77.8	69.8
JoDavies.....	21,917	389	17.7	519	3	4	2	5	1	1	1	1	14	36.0	27.0
Johnson.....	12,022	190	15.8	285	4	1	3	1	1	1	1	1	15	78.9	52.6

DIVISION OF VITAL STATISTICS.

Kane	1,960	2,386	44	221	181	91	41	131	91	1321	6731	55.5
Aurora	37,411	52,994	22	15	10	5	1	6	4	48	791	79.1
Elgin	27,653	62,624	12	15	5	3	1	6	4	48	791	79.1
Kankakee	45,688	735	12	18	16	7	3	6	3	6	43	43.0
Kendall	17,133	398	19	7	10	7	1	5	3	73	104.5	83.5
Knox	10,074	156	15	2	1	2	3	2	3	12	76.9	51.3
Galesburg	46,814	940	20	1	9	3	2	4	3	44	46.8	36.7
LaSalle	24,104	671	9	9	6	1	1	8	8	25	45.9	49.0
LaSalle	93,357	1,757	18.8	2,213	28	21	11	7	18	132	75.1	56.6
LaSalle	15,854	544	26.9	7	6	5	1	5	8	25	78.7	78.7
Ottawa	11,014	865	23.9	2	3	3	1	8	1	20	76.0	76.0
Ottawa	14,860	365	24.4	6	4	5	1	8	1	20	76.0	76.0
Peoria	17,255	1,345	17.4	20	22	13	4	8	16	100	74.3	54.4
Peoria	16,716	440	22.3	9	11	7	8	4	9	40	80.9	85.7
Lawrence	21,380	579	27.1	8	16	6	3	6	4	35	80.4	80.4
Lee	28,043	592	21.1	665	7	12	2	6	3	39	65.9	58.6
Livingston	39,070	650	16.6	928	7	11	10	3	4	50	76.9	54.0
Logan	28,562	546	18.6	701	6	17	3	5	3	31	56.5	44.2
Macomb	12,055	234	19.4	259	8	9	2	1	1	12	51.3	42.1
McDonough	23,564	534	16.3	788	5	12	3	3	2	24	50.4	47.1
McHenry	23,044	548	16.3	788	5	12	3	3	2	24	50.4	47.1
McHenry	29,431	1,315	18.7	1,668	28	17	10	8	11	84	84.4	68.0
Bloomington	29,431	1,315	18.7	1,668	28	17	10	8	11	84	84.4	68.0
Macomb	66,873	1,596	23.4	4	19	13	6	10	6	108	80.9	68.1
Macomb	45,777	1,124	24.6	23	14	18	6	17	7	90	84.1	55.0
Macomb	58,291	1,150	19.7	1,381	15	11	4	7	8	76	76.7	66.3
Madison	109,539	2,446	22.3	3,596	38	26	12	10	20	173	70.3	66.3
Madison	55,786	659	25.6	6	8	5	1	5	4	59	45.6	78.8
Alton	16,507	350	21.5	868	6	6	1	5	4	62	73.6	69.1
Granite City	37,899	842	20.2	897	16	12	8	6	8	99	87.9	87.9
Marion	12,986	508	23.8	15	4	8	2	1	1	19	68.1	54.3
Centralia	14,760	279	18.9	350	7	3	4	1	1	17	54.8	43.1
Marshall	16,634	310	18.6	394	5	5	3	2	2	24	93.2	74.8
Massac	13,559	242	17.8	321	3	4	7	2	2	16	67.0	49.3
Massac	11,694	258	22.1	277	5	3	2	3	2	22	54.2	26.3
Menard	18,800	406	21.6	446	10	2	2	3	3	8	37.7	26.3
Mermer	12,839	212	16.5	304	2	4	1	1	1	7	56.8	76.7
Montgomery	42,345	897	21.2	1,043	19	8	6	6	11	48	74.9	60.3
Montgomery	31,967	641	19.1	796	12	8	5	5	1	48	74.9	60.3
Morgan	16,738	320	22.9	323	4	5	3	2	1	13	42.6	42.6
Jacksonville	28,830	450	17.1	636	6	8	7	3	2	13	74.1	52.9
Peoria	113,490	1,812	16.0	2,689	31	23	9	7	22	151	53.2	56.3
Peoria	1,527	17.0	32	45	19	7	6	15	11	116	87.0	86.5
Peoria	23,627	587	25.5	21	11	4	1	2	3	44	75.0	64.5
Peoria	17,714	372	10	4	3	1	2	3	2	24	78.9	64.5
Pike	26,866	517	19.2	637	15	6	6	5	3	44	36.1	69.1
Pope	9,635	88	9.1	228	1	1	1	3	2	4	45.1	17.5
Pulaski	14,639	205	14.0	347	6	5	4	3	5	38	185.4	109.5

BIRTH AND INFANT DEATH RATES—CALENDAR YEAR 1921—Concluded.

Area. By counties and principal cities.	Births and rate.			Deaths of infants under 1 year of age (exclusive of stillbirths) and death rate per 1,000 live births reported.										
	Population.	Births and rate.		Less than 1 day.	Less than 1 week.	Less than 1 month.	Less than 2 months.	Less than 3 months.	3-5 months.	6-8 months.	9-11 months.	Total under 1 year.	Rate per 1,000 Reported live births.	Estimated rate.
		Reported.	Probable actual number.											
Putnam.....	7,582	146	19.3	180	1	4	3	1	5	3	1	9	61.6	50.0
Randolph.....	26,109	624	21.4	690	16	33	6	5	6	6	4	43	98.9	62.3
Rock Island.....	14,044	282	20.1	333	3	5	5	3	4	4	1	21	74.5	63.1
Rock Island.....	95,981	1,647	17.2	2,268	30	14	27	11	6	11	5	108	65.6	47.6
Moine.....	51,745	739	14.3	873	7	7	7	4	2	5	7	32	43.3	36.7
Rock Island.....	56,551	794	14.0	873	15	4	4	4	5	6	2	41	53.0	47.0
St. Clair.....	139,088	2,768	20.1	3,296	40	51	44	17	13	22	25	239	81.8	69.5
Bellefleur.....	25,398	610	21.5	602	6	7	9	6	5	7	1	58	69.5	65.1
East St. Louis.....	68,036	1,364	19.0	1,612	23	31	26	6	8	15	11	128	93.8	79.4
Saline.....	39,613	1,642	16.2	1,612	9	16	10	6	8	13	12	9	83	88.4
Sangamon.....	101,690	2,069	20.3	2,419	30	32	19	17	13	24	21	165	76.7	68.5
Springfield.....	60,844	1,350	22.4	1,450	19	22	15	14	10	30	14	6	180	88.8
Schuyler.....	13,285	260	19.6	315	1	1	3	3	1	3	1	9	34.6	28.6
Scott.....	9,439	131	13.8	225	2	3	2	2	1	1	1	11	94.0	48.9
Shelby.....	29,601	604	20.4	702	11	11	8	2	2	4	4	41	87.9	58.4
Stark.....	9,693	198	20.4	230	2	3	1	1	2	4	3	12	63.6	52.2
Stephenson.....	37,894	738	19.5	898	10	11	8	2	4	4	3	44	59.6	49.0
Freeport.....	20,149	483	24.0	510	8	8	7	3	3	3	1	25	51.8	46.2
Tazewell.....	32,236	791	20.2	930	12	8	4	3	2	2	1	43	54.4	46.2
Pekin.....	12,512	266	21.6	292	3	4	4	3	1	2	1	15	56.4	51.4
Union.....	20,249	396	19.6	490	6	5	4	3	1	2	1	28	70.7	58.3
Vermilion.....	87,425	1,817	20.8	2,072	38	23	23	18	12	20	13	153	84.2	73.8
Donville.....	24,034	548	22.8	622	33	15	9	10	8	18	7	78	99.1	94.9
Warren.....	14,034	248	17.7	333	5	7	1	1	2	3	3	21	84.7	63.1
Washington.....	18,035	308	17.1	509	9	9	1	1	1	3	4	30	63.3	53.9
Wayne.....	22,772	385	16.9	540	7	7	6	2	2	1	2	29	64.9	46.8
White.....	20,081	411	20.5	476	12	7	7	4	4	3	3	29	75.3	53.7
Whiteside.....	36,432	788	21.6	863	16	7	6	4	1	8	3	35	86.2	70.5
Will.....	94,231	1,796	19.1	2,233	33	36	17	7	4	12	14	158	86.0	60.3
Will.....	59,024	707	18.1	926	16	20	17	9	4	21	11	81	88.0	77.6

Williamson.....	63,564	1,568	24.7	45	30	21	13	9	27	19	11	175	(T) 111.6
Herrin.....	11,633	866	51.4	15	6	6	3	7	3	6	4	59	(T) 104.8
Winnebago.....	93,222	1,927	20.2	24	24	16	9	6	14	10	6	109	58.6
Rockford.....	68,780	1,696	23.2	16	21	9	6	6	17	8	4	83	57.4
Woodford.....	19,340	435	22.5	7	8	7	2	1	4	---	---	29	66.7
Total State.....	6,616,098	131,289	19.8	156,802	2,118	1,952	1433	1334	1699	1511	1375	10,644	81.1
Total down state.....	3,834,602	74,746	19.5	90,880	1,328	1,075	865	334	699	511	375	5,563	74.8
Chicago City.....	2,781,496	56,543	20.3	65,921	790	877	*	*	*	*	*	5,051	89.3
													76.6

* Chicago record for this period not available. Chicago deaths of infants 7 days and over but under 6 months, total 2,316. Chicago deaths of infants 6 months and over but under 1 year, total 1,068.

† Exclusive of Chicago.

(T) Probably true rate: Reported births in excess of "Probable Number" based on Federal Rate of 23.7.

DIVISION OF CHILD HYGIENE AND PUBLIC HEALTH NURSING.

C. W. EAST, M. D., *Superintendent.*

The division began the year on the same basis as during the previous year. There were two medical members, two nurses and one stenographer. The legislature provided in the budget for the addition of a medical member (pediatrician) and three nurses, including a supervising nurse and an assistant supervising nurse.

Miss Bernice Brady, R. N., came to the division September 1. She took a leave of absence January 1 to June 1.

Dr. Elizabeth B. Ball and Mrs. Madge D. Reiseman, R. N., were secured as pediatrician and supervising nurse, respectively, the first part of January, 1922.

Miss Blanche L. DuVall, R. N., began work the latter part of March.

Dr. Harry Schumacher resigned November 1, 1921 and Dr. R. C. Cook was secured to take his place.

So it will be seen that the division did not have its complete personnel for more than one month of the entire year, i. e., the month of June. Besides, all of the new members needed training in their new duties. Labor overturn always entails extra expense. The necessity of training new personnel, some of the members in public health work for the first time, and some of them having had experience previously only in general practice made it necessary to give much time in specific training and in getting the personnel in intelligent contact with the field.

It is creditable to the new personnel that it adapted itself to the new work so readily. The intelligence, enthusiasm and industry of each member are worthy of all commendation. Consequently an amount of service to the department and the State has been rendered which the charts following outline and which may be studied and received with pride.

PUBLIC HEALTH NURSING.

Public health nursing deserves especial mention. In less than six months every county in the State has been touched and a State-wide program of standardizing, coordinating and establishing public health nursing services is well under way.

BETTER BABIES' CONFERENCES.

The division has conducted thirty-three better babies conferences in which 3,447 babies were examined.

In this work foundations have been laid and schedules actually formed which will carry on this service far beyond anything of the kind ever attempted in this or any other state. There is no extension work anywhere carried on more intensively and comprehensively than this work. The method has been not only to reach many babies and counsel many parents, but also to enlist local cooperation, both medical and lay, in the conduct of these conferences. The conferences, therefore, have been both demonstrative and cooperative. Their technique and outlook have been fixed in the minds of the community. In every place there is a demand both for the repetition of the work and for the establishment of its principles as a part of the regular program of the community.

CRIPPLED CHILDREN'S CLINICS.

The very bulk of this work should speak for its wide acceptance. One hundred and eighty-five clinics have been held in which 3,257 persons have been cared for. Of this number 1,213 were new cases. Only 54 have been hospitalized. The sociological value of this latter fact cannot be over-estimated. It has attracted the attention of leading students of philanthropy and conservation throughout the nation. The work has directly served 335 physicians. It has drawn practically every public health nurse in the State, outside of Chicago, into a cooperative service. More public health nurses serving under various agencies are drawn together in cooperation in our crippled children's work than in all other ways combined.

This work has enlisted the enthusiastic support of the most important civic bodies everywhere. It has given rise to one organization in Springfield alone of over one thousand members, viz., The Crippled Children's Aid Society.

While difficulties are being met in the department's program of coordination of public health activities our crippled children's work is the common meeting place of Red Cross workers, Tuberculosis Association employees, department of health, child welfare organizations and medical societies.

As to the private practice of medicine and surgery nothing has ever been done by this department to serve the family physician so directly in every way as this piece of work.

EDUCATIONAL WORK.

The division has revised the pamphlet "Diet Lists for Infants and Children," thousands of copies of which are in demand. It has also revised the "Poliomyelitis Catechism." It has written new editions of "Better Babies" and "How to Conduct a Better Babies Conference."

Numerous articles have been written for "The Illinois Health News" and other journals.

This production of literature alone is a greater piece of work than is accomplished by most state divisions of child hygiene.

Lectures have been given everywhere in the State.

A large amount of correspondence has been carried on, most of it educational in character.

The division has been represented on the program of the most significant conventions championing various phases of public welfare.

The record of the year is submitted as presenting a body of fruitful work of truly great magnitude.

BETTER BABIES CONFERENCES—JULY 1, 1921—JUNE 30, 1922.

City.	Date.	Number children examined.
Springfield	August 19-27	831
Delwood Park	August 27	82
Anna	September 1-2	43
Macomb	September 1-2	121
Area	September 6-8	118
LaHarpe	September 8-9	80
Aledo	September 14-16	50
Taylorville	September 14-15	166
Villa Grove	September 21-22	44
West Frankfort	September 27-28	180
Paxton	September 27	78
Blandinsville	December 17	20
Geneva	January 21	42
Galesburg	March 17	75
Carbondale	April 20-22	48
Harrisburg	April 27-29	46
Waverly	May 2	49
Chester	May 4	69
Centralia	May 2-6—11-13	206
Benton	May 4-6	34
Galena	May 10	16
Louisville	May 11	45
Hindsboro	May 13	30
Stockton	May 15-16	100
Onarga	May 20	47
Xenia	May 27	32
Rochelle	June 2	34
Polo	June 3	27
Forreston	June 5	25
New Burnside	June 8	50
Osark	June 9	44
Aurora	June 12-24	526
Rock Island	June 27-29	89
Total		3,447

CRIPPLED CHILDREN'S CLINICS—NUMBER OF NEW CASES ATTENDING AND BY WHOM REPORTED—JULY 1, 1921-JUNE 30, 1922.

Clinic.	Number of clinics.	Phys- ician.	Nurse.	Parents.	Others.	Un- known.	Total.
Alton.....	5	20	11	-----	8	7	46
Aurora.....	5	6	7	-----	6	8	27
Blue Island.....	2	-----	-----	-----	-----	2	2
Champaign.....	5	9	30	14	8	6	67
Cicero.....	5	1	10	1	1	3	16
Danville.....	6	17	20	6	20	15	78
Elgin.....	5	4	12	7	8	4	35
East St. Louis.....	3	9	13	7	7	6	35
Freeport.....	5	27	18	-----	11	12	68
Galesburg.....	5	14	26	-----	9	9	58
Jacksonville.....	5	13	14	3	6	6	42
Joliet.....	5	7	9	-----	5	6	27
Kankakee.....	6	7	5	1	2	-----	15
Kewanee.....	3	20	5	3	8	8	44
Moline.....	4	3	12	6	2	-----	23
Monticello.....	4	8	2	7	-----	3	20
Mattoon.....	5	21	6	1	6	1	35
Ottawa.....	5	22	4	2	7	1	36
Princeton.....	5	15	25	1	10	7	58
Quincy.....	4	10	7	-----	10	4	31
Rochelle.....	2	15	18	-----	6	8	47
Rockford.....	4	2	2	8	3	5	20
Rock Island.....	5	4	4	2	3	3	16
Streator.....	5	3	7	2	5	5	22
Waukegan.....	5	4	12	-----	5	7	28
Springfield.....	49	45	61	11	46	10	173
*St. John's Sanatorium.....	12	7	16	3	28	-----	54
Carlinville.....	2	-----	6	2	2	2	12
Wyoming.....	1	3	9	1	-----	-----	13
St. Charles.....	1	1	-----	-----	-----	5	6
Carbondale.....	1	2	-----	-----	-----	8	10
Greenville.....	1	-----	-----	-----	-----	2	2
Harrisburg.....	1	2	-----	1	9	2	14
Benton.....	1	1	-----	1	4	3	9
Centralia.....	1	1	-----	1	2	2	6
Marion.....	1	2	-----	-----	4	2	8
Lawrenceville.....	1	10	-----	-----	-----	-----	10
Total.....	185	335	371	84	251	172	1,213

* Constant supervision.

TOTAL SUMMARY—CRIPPLED CHILDREN'S CLINICS.

Clinic held at	Number of cases in attendance.	Number of old cases.	Number new cases.	Number infantile paralysis.	Number tuberculosis.	Number malnutrition.	Number spastic paralysis.	Number other orthopedic condition.	Number to receive special and assisted training.	Number given advice as to shoes, braces, casts or other appliances.	Referred to family physician.	Wassermann test.	Number X-Ray.	Number operations advised.	Number operated by us.	Number operated by others.	Advised hospital or institutional care.
Alton.....	152	106	46	10	2	8	11	15	17	28	6	5	2	3	1	---	7
Aurora.....	63	36	27	11	---	3	2	11	10	21	1	---	1	1	---	1	1
Blue Island.....	6	4	2	1	---	1	---	---	---	1	---	---	---	1	---	---	4
Champaign.....	119	52	67	12	2	7	2	44	13	43	6	---	8	6	---	1	4
Cicero.....	40	24	16	7	---	1	1	7	6	6	1	1	1	6	---	---	4
Danville.....	211	135	78	20	5	3	7	43	24	53	6	3	5	15	---	---	10
Elgin.....	68	33	35	14	1	3	3	14	17	25	5	1	3	1	---	1	3
East St. Louis.....	90	25	35	18	1	---	6	10	3	12	5	1	4	6	---	---	8
Freeport.....	155	87	68	16	5	11	3	36	21	34	9	4	7	10	---	1	3
Galesburg.....	109	51	58	23	3	4	3	25	16	37	3	3	7	7	---	---	5
Jacksonville.....	100	58	42	13	1	2	---	26	13	36	2	1	4	10	---	---	5
Joliet.....	101	74	27	6	---	2	5	14	18	20	5	2	1	1	---	---	2
Kankakee.....	65	50	15	3	---	---	---	12	8	18	0	1	3	---	---	1	---
Kewanee.....	61	17	44	16	3	4	7	14	18	36	4	5	5	5	---	---	6
Moline.....	58	35	23	8	1	1	1	12	4	15	1	1	7	---	---	---	7
Monticello.....	53	33	20	5	---	1	2	12	9	16	0	---	3	---	---	---	1
Mattoon.....	87	52	35	11	2	4	2	16	11	29	4	1	6	8	---	---	6
Ottawa.....	115	79	36	20	1	1	---	14	20	23	2	2	1	4	---	---	1
Princeton.....	107	49	58	16	4	7	3	31	12	29	9	2	6	9	---	---	4
Quincy.....	46	15	31	8	4	2	6	11	6	9	1	4	6	4	---	---	2
Rochelle.....	53	6	47	17	3	2	3	22	13	21	3	3	3	6	---	---	7
Rockford.....	46	26	20	7	1	1	---	11	14	---	---	---	---	---	---	---	7
Rock Island.....	56	40	16	6	---	2	---	8	7	11	9	6	---	2	---	3	3
Streator.....	66	44	22	6	1	---	1	14	10	19	---	1	2	2	---	---	---
Waukegan.....	78	50	28	13	2	1	2	10	13	33	2	---	2	2	---	---	---
Springfield.....	672	499	173	51	14	9	11	88	73	260	8	16	18	25	---	---	29
St. John's Sanatorium.....	419	365	54	29	11	1	3	10	114	228	6	129	12	4	21	---	---
Carlinville.....	13	1	12	3	3	---	1	5	7	4	---	---	1	1	---	---	---
Wyoming.....	13	---	13	5	1	---	2	5	3	4	2	2	2	2	---	---	2
St. Charles.....	6	---	6	1	---	---	---	5	---	2	1	---	---	---	---	1	---
Carbondale.....	10	---	10	6	---	---	---	4	1	7	---	---	1	3	---	---	---
Greenville.....	2	---	2	2	---	---	---	---	---	2	---	---	---	---	---	---	---
Harrisburg.....	14	---	14	4	1	1	1	7	1	5	---	---	2	3	---	---	3
Benton.....	9	---	9	4	1	---	4	---	---	---	---	---	---	---	---	---	---
Centralia.....	6	---	6	3	---	---	---	3	1	3	---	---	1	2	---	---	2
Marion.....	8	---	8	2	1	1	1	3	5	---	---	---	---	---	---	---	---
Lawrenceville.....	10	---	10	---	3	---	2	5	1	3	3	1	---	---	---	---	---
Total.....	3,257	2,044	1,213	597	77	85	89	765	509	1093	104	196	130	163	22	8	135

CLERICAL WORK.

July 1, 1921-June 30, 1922.

Letters received directly.....	668
Letters referred by the director.....	101
Letters referred by other divisions.....	35
Expense accounts.....	150
Clinic records.....	5,884
Clinic schedules.....	782
Reports.....	112
Telegrams.....	59
Clinic letters.....	113
Questionnaires mailed.....	95
Abstracts.....	20
Form letters.....	286
Literature mailed.....	56

DIVISION OF LABORATORIES.

THOMAS G. HULL, PH. D., *Superintendent.*

The personnel and organization for the laboratories are the same as outlined in the diagram published in the Fourth Annual Report, 1921. A total of fifteen persons are employed with the special services of six bacteriologists in the branch laboratories and special medical services for the administration of preventive rabies treatment.

As was noted a year ago, the diagnostic work of the laboratory is divided between quarters in the State House and quarters at the former hog cholera serum laboratory five miles north of the city. At the latter place six persons are employed, doing the Wassermann and other complement fixation work, preparing specimen outfits for mailing purposes and taking care of the laboratory animals. The buildings are very convenient to work in, are fitted with gas, electricity and steam and provide ample quarters and light. Since they are so inaccessible, however, and the telephone service is so poor, they cause considerable inconvenience, especially when emergency reports are required. The expense incident to motor transportation, to the upkeep of the buildings and to the time wasted in transporting the personnel to and from the laboratory, make their continuance out of the question when nearer quarters are available.

On April 8, 1922, the Secretary of the Treasury appointed the chief of the division as assistant collaborating epidemiologist of the United States Public Health Service, for duty in the State of Illinois. At the present time there are but three other assistant collaborating epidemiologists in the State, located in Chicago, Quincy and East St. Louis. The chief of the division will cover the remainder of the territory in the State as best he can, using for the basis of his work the reports on laboratory specimens coming from various communities.

DIAGNOSTIC SECTION.

During the past year there were made at the main laboratories in Springfield (both at State House and North Laboratory), 92,082 examinations. These pertained to diseases listed in Table LI and to many miscellaneous examinations such as specimens of animal brains for rabies, specimens for meningococcus meningitis, for pneumococcus typing, for amoebic and bacillary dysentery, for hookworm, Vincent's angina, pertussis, streptococcus sore throat and various others that



Figure 44.—North laboratory. Building at right used by Division of Laboratories, Department of Public Health; one-story building at left used by Division of Foods and Dairies, Department of Agriculture. For transportation of personnel, G. M. C. army ambulance is shown at left while Ford car, front wheel shown at left, is used for messenger service.



Figure 45.—North laboratory. Animal house shown at left, heating plant at right. Commodious quarters for animals are provided here.

EXAMINATIONS MADE AT MAIN LABORATORY IN FISCAL YEAR 1921-1922.

	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Total.
Wassermann (blood).....	2,179	2,055	2,485	2,241	2,211	2,228	2,569	2,251	2,642	2,521	2,945	2,283	28,611
Wassermann (spinal fluid).....	76	89	107	84	76	88	74	62	88	85	89	109	1,057
Complement fixation for tuberculosis.....	206	200	188	186	165	181	176	232	280	257	311	230	2,612
Complement fixation for gonorrhea.....	170	169	181	189	159	159	188	203	238	212	274	177	2,319
Blood for malaria.....	21	17	17	12	5	2	8	6	9	4	7	11	119
Diphtheria cultures.....	135	200	508	7,625	5,953	6,728	1,962	1,809	1,371	771	762	837	28,661
Typhoid (Widal).....	395	396	346	290	155	124	87	89	70	112	145	152	2,361
Paratyphoid A (Widal).....	395	396	346	290	155	124	87	89	70	112	112	152	2,328
Paratyphoid B (Widal).....	395	396	346	290	155	124	87	89	70	112	112	152	2,328
Sputum for tuberculosis.....	660	670	603	637	558	575	702	724	797	773	776	742	8,217
Pus for gonococci.....	218	255	261	245	250	301	249	191	208	197	223	206	2,812
Feces and urine for typhoid.....	47	63	41	78	61	87	64	41	51	57	101	155	846
Colloidal gold test.....	18	33	41	40	24	38	31	41	33	24	26	37	386
Spinal fluid—													
Chemical.....	11	9	21	27	17	19	23	29	24	18	17	28	243
Microscopical.....	11	15	28	27	16	16	23	33	22	19	15	25	250
Miscellaneous.....	33	85	43	51	69	36	23	18	31	25	48	28	490
Total.....	4,970	5,048	5,570	12,312	10,029	10,831	6,353	5,937	6,024	5,299	5,963	5,324	83,630

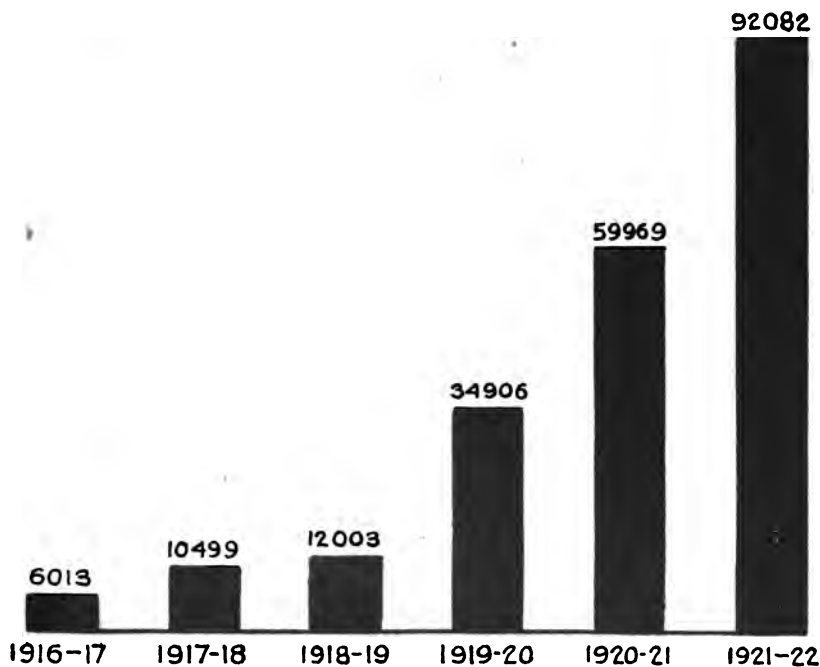


Figure 46.—Examinations made by the Division of Laboratories during the past six years. Each year the work is increasing fifty per cent over the year before.

relate in one way or another to the control of communicable diseases. Quite a number of milk specimens have been examined for tubercle bacilli and streptococci, as well as for routine bacterial counts.

Members of the laboratory force have been alert to improve the technic and reliability of laboratory examinations wherever they could. In the Wassermann test, the plain cholesterinized antigen formerly used has been replaced by Kolmer's acetone insoluble antigen which has been recommended in his standard technic. The ice box fixation for eighteen hours has also been substituted for body temperature incubation of one hour. While this delays reports on the Wassermann specimens a day, it is believed that enough advantage is gained in making the reports more reliable to repay the extra time and effort. The checking up of typhoid convalescents for carriers has increased the typhoid work many fold and has necessitated working out a technic for handling large numbers of specimens which will be simple as well as reliable. Specimens of feces and urine are planted on differential culture media as Endo or brilliant green as usual, and, after twenty-four hours, suspicious colonies picked to a double sugar medium. In this double sugar medium, phenol red is used as an indicator with lead acetate to differentiate the typhoid, paratyphoid A and paratyphoid B organisms. Almost without exception, a culture which gives typical reactions for typhoid on these tubes will be agglutinated by typhoid serum.

A problem which we have been trying to solve is the matter of test tubes containing blood specimens for the Wassermann test being broken in the mail. Many different kinds of glassware have been used and it is believed that at last one has been found which will satisfy the requirements and reduce the breakage of two and one-half per cent among blood specimens submitted. Pyrex tubes gave no better results than the ordinary test tube. The present tube is of the "Board of Health" quality with walls one millimeter thick, and the inside diameter twelve millimeters. This thick wall and narrow diameter seems to resist rough treatment to a marked degree.

BRANCH LABORATORIES.

During the year there were made at the branch laboratories 8,442 examinations of diphtheria cultures, as is indicated in Table LII. The branch laboratory work for diphtheria diagnosis has been continued by paying the bacteriologists at the rate of 50 cents per examination. Since the appropriation was insufficient to pay for all the diphtheria work in the various territories, it became necessary to confine the activities of the branch laboratories to the diagnosis only. Even then, many examinations were made by the branch laboratories for inspection purposes and for quarantine release since the physicians very often did not indicate the purpose of the examination or, in several instances,

marked them all as for diagnosis. This depleted the branch laboratory fund to such an extent that it has been necessary to make arrangements for the coming year to pay each bacteriologist a stated sum for the examination of cultures for diagnosis, forwarding cultures for quarantine release and for inspection purposes to Springfield. In no other way will our appropriation for the present biennium be sufficient to complete the year.

Dr. W. H. Gilmore, in charge of the Mt. Vernon branch laboratory, resigned in April, thus discontinuing the only branch laboratory in the southern half of the State. The work was transferred to the laboratory of the East St. Louis City Department of Health under the direction of Dr. C. W. Lillie with Dr. M. E. Brennan acting as bacteriologist. There have been urgent calls from various communities in the State for the establishment of branch laboratories, especially from Kankakee, Quincy, Herrin, Carbondale and DuQuoin. Because of the insufficiency of funds, however, it has been impossible to meet the demand.

DIPHTHERIA EXAMINATIONS AT BRANCH LABORATORIES IN FISCAL YEAR 1921-1922.

	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Total.
Chicago.....	207	142	438	728	575	619	242	158	154	89	119	186	3,657
East St. Louis.....											13	9	22
Galesburg.....			32	169	333	632	432	180	78	172	65	57	2,150
Moline.....	12	28	45	34	38	31	77	23	22	21	8	32	371
Mt. Vernon.....	19		69	171	197	154	102	42	22	22	5		803
Ottawa.....	4	5	6	44	45	70	31	56	24	32	15	15	347
Urbana.....		15	53	98	164	249	113	143	83	84	44	46	1,092
Total.....	242	190	643	1,244	1,352	1,755	997	602	383	420	269	345	8,442

FIELD LABORATORY.

The field laboratory has been called out but four times during the past year. This was principally because of lack of personnel to make more trips. Typhoid epidemics at Kewanee, Rockford and Marshall were the causes of three of the calls while a diphtheria survey at Taylorville was the fourth. The advantages of a field laboratory in times of epidemic are so many that it is intended to use it to a greater degree the coming year.

The equipment carried in the field laboratory depends upon the nature of the investigation to be made, the facilities of the local community as to gas and electricity, and whether there are already in the town established laboratories or quarters in a hospital where a laboratory can be established.

The Kewanee typhoid epidemic was especially interesting because of the conclusiveness of results. During the first part of May there

appeared at Kewanee about twenty-five cases of typhoid fever. In response to a request from local authorities, an epidemiologist from the State Department of Public Health, together with a bacteriologist and a field laboratory, was assigned to the problem. A preliminary investigation indicated that all cases were on the milk route of Dairyman X. This dairyman bought milk from seven different farms, distributing the product without pasteurization. He produced no milk himself.

The first task was to study the farms from which the milk came. Among forty persons on the seven farms, four gave a history of having had typhoid fever. Urine and stool cultures were negative for typhoid bacilli however. Continuing laboratory tests on the remainder of the

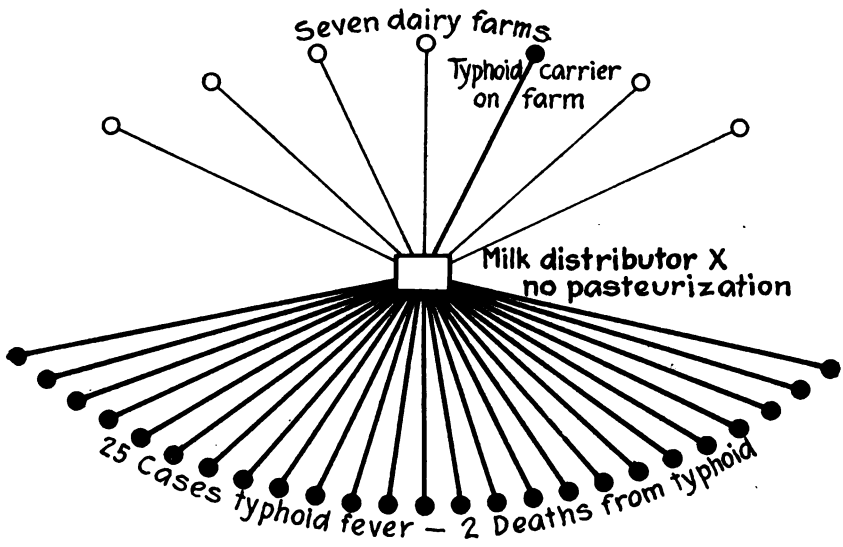


Figure 47.—Kewanee epidemic of typhoid fever. (Heavy lines indicate typhoid infection.) Seven dairy farms supplied milk to distributor X, who sold milk without pasteurizing it. One person on one farm was a typhoid carrier and caused 25 cases of typhoid fever and two deaths in Kewanee.

residents, Mrs. R. was found to be a typhoid carrier. She gave a history of a fever lasting about three months several years previously. No diagnosis had been made, however. No other persons on the seven farms could be found who were responsible for the outbreak. Without doubt Mrs. R. was the cause of the epidemic. On her farm it was her particular task to look after the milk.

An interesting side light is worth mentioning. Mr. X, the distributor, did not pasteurize the milk he sold. As a result of distributing infected milk he not only lost every dollar he invested because his business was ruined, but he almost died himself from typhoid fever, contracted from the infected milk.

BIOLOGICAL SECTION.

Biological products purchased with laboratory funds have been distributed as formerly by the Division of Communicable Diseases. More than four hundred agents scattered throughout the one hundred and two counties have been supplied with diphtheria antitoxin, typhoid vaccine and silver nitrate. Materials for the Schick test and diphtheria toxin-antitoxin have been furnished on request only, from Springfield directly to physicians, since these materials are so unstable that it was feared they would deteriorate at the agencies.

In September, 1921, new contracts were let for biological products, toxin-antitoxin being added to the list previously purchased. Following are the companies with whom the department now has contracts:

Lederle Antitoxin Laboratories.....	Triple Typhoid Vaccine.
U. S. Standard Products Co.....	Diphtheria Antitoxin.
	Toxin-Antitoxin.
Gilliland Laboratories	Schick material.
	Silver Nitrate.

Material for the Schick test has been obtained during the past year, without expenditure of money, on the exchange account with the Lederle Antitoxin Laboratories where outdated antitoxin was accepted by them for credit. In Table LIII is indicated the amount of money spent for various other biological products.

	Packages.	Cost.
Diphtheria antitoxin''''.....	75,814	\$54,959 00
Typhoid vaccine''''.....	7,499	2,844 59
Diphtheria toxin-antitoxin.....	331	217 25
Silver nitrate.....	4,000	500 00

Again attention must be called to the fact that the appropriation for the purchase of biological products is entirely inadequate. For several years past the cost of diphtheria antitoxin alone has amounted to more than fifty thousand dollars a year, while the appropriation by the legislature has averaged around thirty thousand dollars a year for this material. Emergency appropriations by the legislature have been the only means of procuring enough material to protect the lives of citizens of Illinois from death from diphtheria.

SUPPLY SECTION.

During the past year more than one hundred thousand outfits for mailing specimens to the laboratories have been distributed. This is an increase of nearly forty-five per cent over the year before. The largest number of outfits distributed have been for diphtheria specimens but demand for all kinds of outfits has also shown a decided increase. For diphtheria work, two kinds of outfits are in use, one being a swab contained in a glass tube with a double mailing case as required by postal regulations for use at those times when a single specimen is to be

sent; the other is a swab contained in an envelope and sent out in large unit shipment numbers by express in an ordinary box in instances where large numbers of swabs are required for cultures as the result of inspection services. Sputum specimens preserved with cresol are received in wide mouth glass vials, a double mailing container being used. For Wassermann specimens, a blood tube with a sterile needle is furnished in a double mailing case, this tube being available for submitting spinal fluid or other material which should be sent in a sterile dry outfit. For typhoid culture, sterile 25 per cent glycerine is sent out in vials similar to those used for sputum. It has been found that by using adhesive tape on the stoppers of the glycerine vials, the contents do not leak out in transit and arrive in a very satisfactory condition. Microslides are sent out in a single mailing case, each microslide in a small coin envelope. These are used for smears of pus, of blood, or exudate intended for microscopical examination. Specimens for the Widal test are submitted on parchment paper placed in an ordinary envelope. The cost of this outfit is very slight. In Table LIV is indicated the number of specimen outfits, by months, distributed during the past year.

SPECIMEN OUTFITS DISTRIBUTED IN FISCAL YEAR 1921-1922.

	Sputum.	Wasser- mann.	Micro- scope slides.	Diph- theria.	Widal.	Feces.	Total.
July.....	960	2,857	320	430	566	131	5,264
August.....	991	2,716	416	350	597	117	5,187
September.....	1,037	2,845	429	3,341	535	206	8,393
October.....	1,424	2,812	452	13,926	347	345	19,306
November.....	925	2,881	348	15,019	234	268	19,675
December.....	979	2,845	617	5,792	114	170	10,517
January.....	797	3,130	489	2,100	144	103	6,763
February.....	1,122	2,465	207	3,643	128	136	7,691
March.....	1,472	2,619	332	1,477	139	153	6,192
April.....	869	2,958	335	1,412	169	120	5,863
May.....	877	2,872	340	2,087	66	175	6,417
June.....	1,084	2,576	429	1,927	198	549	6,763
Total.....	12,537	33,586	4,714	51,504	3,237	2,473	108,031

CLERICAL SECTION.

The rapid increase in the growth of the laboratories during the last three years has necessitated considerable changes in the keeping of records. Methods that formerly were serviceable for a small number of specimens have been found too cumbersome and too unreliable for the present time where thousands of specimens are handled each month. Cramped quarters for the clerical section with insufficient filing space, and the division of the work between the two laboratories have added to the difficulties of the situation.

At the present time, specimens received are immediately given a serial number by which they are afterwards known. They are also

recorded on a daily accession book which gives the name and address of the physician with the name of the patient. The cards with the serial number accompany the specimens and are marked by the bacteriologist whether positive or negative. The use of rubber stamps has greatly facilitated marking the cards in routine work and has also prevented some errors in reporting through illegible writing. As soon as an examination is finished, it is reported to the physician by mail, by telephone or by telegraph, as requested. Carbons of all reports are retained and filed according to the town from which they originate. In times past reports had been filed by physicians' or by the patients' names, which made it impossible to check up on any community for epidemiological purposes. In filing by towns it is possible to discover at a glance what has taken place there at any time in the past.

In addition to the reports submitted to the physicians and the copies kept in the files, copies are also sent to the Division of Communicable Diseases, the Division of Tuberculosis or the Division of Social Hygiene as they are interested, also to the district health superintendents in the communities from which the specimens came and to the local health officers in instances of positive reports. However, reports on venereal disease specimens and on tuberculosis are not sent to the local health officers. For positive reports various colored forms are used and for negative reports the white forms are used.

RABIES FUND.

In accordance with a law passed in 1905, the State Department of Public Health has contracted with a Chicago hospital for treating indigents suspected of having contracted rabies. During the past year \$1,025.00 has been expended for such services. It is again to be emphasized that a much more efficient use of this fund could be made by having the rabies vaccines distributed to the local physicians as requested, rather than having the patient sent to Chicago with the incident increased cost of travel and maintenance and the time and expense of an attendant.

RESEARCH.

Dr. Arthur I. Kendall of Northwestern University Medical School, in writing to the Chicago Department of Health Laboratory, makes the following statement:

There are two factors, however, which the present force and equipment cannot hope to circumvent; the advancement of learning in the field of hygiene and the prompt response to unusual demands incurred by pandemics or epidemics of disease. A research laboratory would supply the physical basis for the solution of these two very important duties. The personnel of such an institution, properly trained and equipped, would, in inter-epidemic times, profitably invade the unexplored domains of communal medicine, and, in epidemic times, furnish a corps of efficient and effective workers immediately available for the most pressing of public needs. A properly equipped and adequately manned research laboratory is not a municipal luxury—it is a civic requirement.

The rapid increase in specimens received for diagnosis has made the establishment of such a research force impossible by the State Department of Health. Various members of the staff, however, as time permitted, have undertaken the study of problems that directly affected their work. It is hoped that several studies now in process will bear fruit before another year, so that results may be published. Among these are bacteriophage, laboratory methods for differentiating smallpox and chickenpox, and improved methods of diagnosing diphtheria. Following are several articles on tuberculosis, gonorrhea, epidemic jaundice and anthrax which have not been published before.

NOTES ON TUBERCULOSIS.

I. *Influence of Calcium on Tuberculosis.* Recently there have appeared in the literature several articles concerning the effect of calcium on tuberculosis. *Twedell* (1) claims that pulmonary tuberculosis does not exist among lime and gypsum workers and that this immunity is due to the action of finely divided particles of lime and gypsum inhaled into the lungs. The lime coming into contact with the moist tissue of the lungs forms calcium hydroxide which acts as an antiseptic. *Contiers* (2), who has made similar observations on lime-kiln workers in France, has attempted to duplicate the conditions of a lime-kiln for therapeutic purposes. He combined dry heat and pulverized calcium floating in air containing some carbon dioxide, and has found that this combination was borne without harm by himself and others, while the signs of a tuberculous focus became rapidly attenuated or disappeared, with an increase in weight and strength. Inhalations were repeated for five minute periods for ten or twelve days.

In order to study under laboratory conditions the effect of lime on tuberculous infections, guinea pigs have been used. An actively growing culture of human tubercle bacilli was ground up with corn starch and blown by means of an aspirating bulb and glass tube into the nostrils of six guinea pigs. Three of the animals were used as controls with no lime treatment while three were given daily administrations of lime. For this purpose an electric fan was placed in a box, the top of which was covered with cheese cloth, on which the lime was sprinkled. The cage containing the guinea pigs was placed over this, the only open space on the cage being the wire bottom over the lime. When the fan was turned on the finely powdered lime rose in a great cloud into the cage with the pigs. That the animals must have inhaled considerable quantities of lime was evidenced by the fact that they were always covered with a white powder when taken out. As a control in each cage, a guinea pig was injected subcutaneously with tubercle bacilli and placed in with those infected by inhalations—one in the "lime" cage and one in the "no lime" cage.

Lime administrations were continued daily for twenty minute periods for twelve days. Whether the large amounts of lime had a toxic effect, or the strong current of air produced by the fan lowered the resistance of the animals, three of the four animals in the lime cage died before the twelve day interval was over. At the end of six weeks, all of the control pigs were dead, while one lime pig was left. This animal was killed after two months, showing at autopsy widespread, profuse infection with tuberculosis.

From this single experiment it is not apparent that lime has any beneficial effect in preventing tuberculosis in guinea pigs, at least under the conditions by which this experiment was conducted.

1. *Twedell*, Med. Rec. N. Y. 1922, 101, 141.

2. *Contiere*, Bull. de l'Acad. Med. 1921, 86, 410.

II. *Serum Experiments with Tuberculosis.* In times past numerous efforts have been made to obtain an efficient anti-tuberculosis serum. Most of these efforts have been without avail. *Maragliano's* serum was prepared by immunizing horses with a mixture of toxin from young cultures together with cultures killed by heating to 100° C. *Marmorek's* serum was also prepared in horses, young tubercle bacilli being used for injection. The efficacy of neither preparation has been entirely proved. Recently *Spahlinger* (1) has described a treatment for tuberculosis in which three different anti-sera are used—prepared by injection of ectotoxins, of antiendotoxins and of the whole bacillus. He does not claim that these preparations have a curative effect but help to neutralize the poisons produced by the tubercle bacillus, thereby enabling the body to overcome the infection.

The experiment here described was only incidental to some other work on tuberculosis but the results were considered worth while reporting.

The resistance of rabbits to infection with human tubercle bacilli is well known. Two rabbits received a single subcutaneous injection of live, virulent human tubercle bacilli. Two weeks later both animals gave strong complement fixation tests for tuberculosis. Neither animal gave any evidence of the disease.

Three guinea pigs received subcutaneous injections of live human tubercle bacilli, one pig being used as a control and the other two receiving 1.5 cc each of pooled unheated serum from the two rabbits mentioned above. Six weeks later the guinea pigs were killed and examined, all showing profuse generalized tuberculosis.

From this single experiment it would appear that the complement fixation test cannot be used as an indicator of immune substances in the blood against tuberculosis, at least in sufficient quantities to protect other animals from contracting the disease when the blood is used as a protective agent at time of inoculation.

1. *Spahlinger*, Lancet, London.—Jan. 7, 1922.

III. *Milk and Tuberculosis*. It has been shown by various investigators (1) that about ten per cent of the milk in a community will harbor virulent tubercle bacilli provided no means have been taken to get rid of the organisms. Since these studies were made (1908-1910) great advances have taken place in regard to tuberculosis, through (a) tuberculin testing of herds and the elimination of infected animals, (b) general cleanliness in milking whereby tubercular cow manure is kept out of the milk and (c) pasteurization whereby any disease germs in the milk are destroyed.

The city of Springfield has a milk supply about 85 per cent of which is pasteurized and much of the rest coming from tuberculin tested herds. To check on the efficacy of the methods in use to prevent the presence of tubercle bacilli, samples of milk from fifteen dairies were picked at random and injected into guinea pigs. In some instances the milk was centrifuged, the cream being injected into one pig and the sediment from the skimmed milk into another; in other instances about 2 cc of whole milk was injected subcutaneously. A few of the pigs died of other infections in the first twenty-four hours. The remainder of the animals showed no signs of tuberculosis even after several months.

In contact with the negative findings in the Springfield milk, a specimen came to the laboratories from LaSalle County that was very interesting. A dairyman in the southern part of that county had a cow that would not eat and seemed to be generally in need of medical attention. He sent a specimen of milk to a veterinarian at some distance, together with the above history. The veterinarian, before going to see the cow, brought the sample of milk to the laboratory for examination. Single drops of the whole milk were smeared on microslides and stained by various methods for whatever organisms could be found. The acid fast stain showed numerous tubercle bacilli present, as many as twenty being counted in one microscopic field. There must have been thousands of tubercle bacilli per cubic centimeter in this specimen of milk. Physical examination of the cow later showed marked tubercular infection of the udder. The sad part of the affair was that the dairyman had been selling the milk previous to this time for human consumption.

The conclusions from these observations are that while the city of Springfield showed no evidence of contamination of its milk with tubercle bacilli in the samples studied, other communities of the State are not safe from tubercular infected milk. For many years the campaign for tuberculin testing and cleanliness has been going on without entirely solving the problem. Compulsory pasteurization of milk must be resorted to if the public is to be safe from this menace.

1. Hygiene Lab. Bull. No. 41, U. S. P. H. S.

IV. *Effect of Heat on the Staining Properties of Tubercle Bacilli*. It is becoming quite a common practice in laboratories to subject to steam sterilization specimens of sputum, before they are examined for tubercle bacilli. The object of such a procedure is to make the specimen safe to handle without fear of infection and to facilitate the smearing of the specimen on microslides through coagulation of albuminous material in the sputum. Jones (1) has shown that more positive results were obtained from heated than from unheated sputa, either examined directly or concentrated.

Several experiments were conducted to determine whether it was safe to sterilize the specimens of sputum by steam and, if so, how much heat, both moist and dry, would be required to cause the tubercle bacillus to lose its acid fast properties.

Experiment 1. Thirty-seven specimens of sputum were selected at random as they came in and each divided into two parts, one part being smeared on microslides in the raw state after the usual manner and the other part being subjected to fifteen pounds pressure of steam for forty-five minutes.

EFFECT OF HEATING SPUTUM BEFORE STAINING.

	Raw sputum.	Heated sputum.
Total examinations.....	37	37
Total positive.....	9	9
Total negative.....	28	28

In every instance the two examinations checked, both being positive or both negative.

Experiment 2. A pooled specimen of sputa containing tubercle bacilli was heated in the autoclave on successive days whenever an opportunity offered, smears being made and examined after each heating. At the twelfth heating, with a total of 8.5 hours the organisms began to hold the stain weakly; at the fourteenth heating with a total of ten hours at an average of eight pounds steam pressure, the tubercle bacilli were no longer acid fast.

Experiment 3. A pooled specimen of positive sputa was divided into seven parts,—three received equal amounts of sterile water, two received equal amounts of twentieth normal NaOH and two equal amounts of twentieth normal HCl. One of each of the above groups was left at room temperature, one of each heated at successive intervals in the autoclave and the last one with the sterile water placed in the incubator at body temperature. After a period of eighteen days all of the specimens at room temperature and the one specimen in the incubator showed acid fast organisms present. Fourteen heatings over the same period were given the other specimens under conditions similar to those in Experiment 1. After the eighth period in the autoclave the specimen containing twentieth normal HCl no longer showed acid fast organisms. The other two specimens—neutral and alkaline—showed acid fast organisms to the end of the experiment.

Experiment 4. From a pooled specimen of positive sputa (previously cooked in autoclave) smears on ten glass slides were made. These were air dried and placed in the hot air oven at a temperature of 154° C. to 156° C. Every ten minutes a slide was removed for staining purposes. At the end of the period,—one hour and forty minutes,—the organisms which had been subjected to the dry temperature for the entire time showed no indication of losing their acid fast property. This indicates that haste in drying a smear of sputum for staining purposes, with incidental heating, does not injure it for the acid fast stain.

CONCLUSIONS.

1. Specimens of sputum may be sterilized in the autoclave before they are examined, with no difference in the results as far as tubercle bacilli are concerned.

2. Tubercle bacilli in a neutral or alkaline suspension may be heated as long as ten hours under eight pounds steam pressure before they lose their acid fast properties; in an acid suspension they lose their acid fast properties in about half the time.

3. Tubercle bacilli may be heated in a dry state for one hour and forty minutes without losing their acid fast property.

1. *Jones, Jour. Lab. & Clin. Med., 1921, 6, 41.*

AN ANALYSIS OF 1200 PUS SMEARS FOR GONOCOCCI.

The diagnosis of gonorrhea by the smear method has been much discussed in scientific literature. It is generally conceded by those of experience that the manner in which the specimen is collected has as much to do with the report as does the care with which the specimen is examined.

The specimens upon which this report is based were received at the laboratory from July, 1919 to February, 1920 and during July and August, 1922. In the first series, 689 specimens were accompanied by sufficient data so that they could be classified as to age and sex. In Table LVI it is noticed that, among the males only fourteen per cent of the specimens were from persons twenty years of age or under, while twenty-nine per cent were from men thirty-one years of age or over; among the females the figures are reversed, forty-one per cent coming from girls under twenty years while but eighteen per cent came from women over thirty years.

Among 956 specimens in the first series, 495 were from males and 461 from females. In Table LVII it is shown that positive findings were reported in 36 per cent of the specimens from males and but 17 per cent in the specimens from females. In the second series (Table LVIII) among 104 specimens from males, 42 per cent were positive while in 160 specimens from females, only 20 per cent were positive.

The lesson to be learned from these figures is that more care should be taken in collecting specimens from females. As will be noted in the accompanying photomicrograph, pus from the vagina will show large numbers of extraneous microorganisms that almost obliterate the pus cells and gonococci; specimens from the cervix or urethra on the other hand will show the pus cells often containing gonococci in large numbers.

PUS SPECIMENS FOR GONOCOCCI ARRANGED ACCORDING TO SEX AND AGE GROUPS.

	1-10		11-20		21-30		31-40		40 and over.		No age given.	
	Pos.	Neg.	Pos.	Neg.	Pos.	Neg.	Pos.	Neg.	Pos.	Neg.	Pos.	Neg.
Males	1	3	28	21	93	123	29	48	13	13	15	108
Total	4		49		216		77		26		123	
Females	15	10	15	89	32	95	8	44	1	8	10	134
Total	25		104		127		52		9		144	

FIRST SERIES OF SPECIMENS—SAME AS TABLE LVI.

	Total examined.	Total positive.	Per cent positive.
Males	495	179	36
Females	461	81	17

SECOND SERIES OF SPECIMENS.

	Total examined.	Total positive.	Per cent positive.
Males	104	44	42
Females	160	33	20

EPIDEMIC JAUNDICE IN ILLINOIS.

Noguchi (1) some years ago drew attention to the fact that the American wild rat was capable of carrying the organism of epidemic jaundice—*Spirochaeta icterohemorrhagiae*. A search of the literature (2) showed that there had occurred previous to this time a score of epidemics of this disease in the United States. Recently *Wadsworth* (3) reported a survey made in New York State where 300 cases of the disease were brought to light. Among 120 rats coming from epidemic localities, 22 showed infection with *Spirochaeta icterohemorrhagiae*. In Illinois some years ago Dr. S. S. Winner, now chief of the district health superintendents, studied an epidemic among school children in the northern part of the State. The source of infection was apparently a privy used by all the children. It has been shown by *Noguchi* that *Spirochaeta icterohemorrhagiae* is discharged in great numbers from the urine of patients with epidemic jaundice, also that the spirochetes have the ability of penetrating the unbroken epithellum when they come in contact with it. Without doubt in this instance an infected individual carelessly contaminated the privy and the children coming in contact with the contamination shortly afterward were infected. No laboratory studies were made on the epidemic.

In the spring of 1922 a small epidemic of jaundice was reported from Vermillion County. Specimens of urine were examined from three patients by Dr. F. A. Tanner of the University of Illinois, in charge of the East Branch Laboratory of the State Department of Public Health. The urine was centrifuged and the sediment examined by stained preparations and by guinea pig inoculation. Spirochaetes were present in one specimen as evidenced by microscopic examination and by infection of the guinea pig with typical symptoms. The source of the infection was not determined as no rats from this locality were procurable.

While the rat population of the State is capable of carrying the spirochetes of epidemic jaundice, examination will be negative unless the infection is present in the locality. Three rats from the vicinity of Springfield were tested for the disease. Specimens of the internal organs were macerated with salt solution and the washings injected into guinea pigs. In no instance

did the animals develop typical symptoms. All that this experiment proved was that these particular rats were not infected with spirochaetes.

To sum up, while epidemic jaundice is occurring in other parts of the country more or less prevalently, the reports in Illinois indicate that only sporadic outbreaks have taken place. The rats in the vicinity of Springfield apparently are not infected.

1. Jour. Exp. Med. 1917, 25, 755.
2. Pub. Health Rpt. U. S. P. H. S. 1918, 33, 1917.
3. Jour. Am. Med. Ass., 1922, 78, 1120.

ANTHRAX IN SHAVING BRUSHES.

In the last two years ten cases of human anthrax have been reported in Illinois to the State Department of Public Health. This small number of cases would not be of significance were it not for the fact that anthrax is practically a new disease in the State, at least, the method of disseminating the infection is new. In almost every instance, the source of infection was traced to contaminated shaving brushes.

Before the World War, hair and bristles for shaving brushes came from Russia, China and Japan, going to France and Germany for cleaning and disinfecting, (1). When the war disturbed this channel of trade, the hair came directly to the United States, where proper disinfection was often neglected. Horse hair is the most common carrier of anthrax spores, most of the hair coming from China and Siberia.

As cases of anthrax began to appear in this country and in England during and following the war, various means were taken to protect the populace against infection. The British Ministry of Health (2) recommended that new brushes before use should be soaked in warm water containing a little washing soda for half an hour and thoroughly washed; they are then soaked in formaldehyde (one part of commercial formalin to sixteen parts of water) for half an hour, after which they are allowed to dry. Complete sterilization of the brush is considered impracticable. The Surgeon General of the United States Public Health Service (1) suggests the following procedure: "The brush should be soaked for four hours in a ten per cent solution of formalin (by formalin is meant a 40 per cent solution of formaldehyde). The solution should be kept at 110° F. and the brush so agitated as to bring the solution into contact with all hair or bristles." In June, 1920 the New York City Department of Health (3) adopted a resolution whereby it was unlawful to manufacture or sell shaving brushes in New York City made of horse hair and also whereby it was unlawful to sell shaving brushes that had not been previously sterilized and so labeled.

In September, 1920 several cases of anthrax in Illinois were drawn to the attention of the State Department of Public Health. Information by the public was immediately requested concerning the procedure to be followed in the use of new brushes. Since heat to any appreciable degree destroyed the brushes, chemical agents were resorted to. The following time is given by *Flügge* (4) for the destruction of anthrax spores:

Carbolic acid, five per cent, Room temperature	Four to 45 days.
Carbolic acid, five per cent, 40° C.	Three hours.
Formalin (40 per cent formaldehyde), five per cent sol.	Six hours.
Hydrogen peroxide, 3 parts per 100	One hour.
Alcohol, 50 per cent	More than four months.

It was recommended therefore that the purchaser of a new shaving brush soak it in five to 10 per cent formalin over night (12 to 15 hours) before using it.

Suspicious shaving brushes from many sources were collected and sent to the laboratory for examination. The usual routine was to sterilize in the autoclave wide bottles or beakers containing twenty to thirty cc of water. Immediately upon removing the sterile water from the autoclave, while it was still close to the boiling point, the brushes were plunged into it and allowed to remain till cool. All vegetative forms of bacteria were thus destroyed leaving only spore forms; the spores were loosened from the hair by soaking in hot water and by frequent agitations. This water was then centrifuged to throw down the spores, the sediment collected and about 0.5 cc injected intraperitoneally into mice. Within twenty-four hours the mice were almost invariably dead if anthrax organisms were present, the peritoneal fluid, spleen, liver and heart's blood showing the organisms present in great numbers in almost pure culture.

At times, anthrax bacilli were also isolated by pouring agar plates with the centrifuged sediment. The anthrax colonies developing were quite characteristic, but the method is more laborious and uncertain, as many other spore forming bacilli must be contended with.

In the 1920 outbreak of anthrax, more than a hundred shaving brushes were examined. Many of these were of the expensive type, bearing the trademark of the manufacturer and carrying a notice that the hair had been sterilized. In no such instance could anthrax organisms be found. The cheap brushes on the other hand, which bore no trademark, were often contaminated. Thirty-six such brushes from various sources, but apparently of the same make, all harbored anthrax spores. The brush which one of the patients had used and from which he had received an infection was examined, but no anthrax organisms could be demonstrated. Apparently the warm water and soap used in shaving tended mechanically to remove the spores.

In February, 1922, a case of anthrax appeared in Illinois, the apparent source of the infection being a shaving brush. The brush used by this patient gave negative findings upon examination for anthrax organisms. The occasion lead to the study of two samples of horse hair and five samples of wild boar bristles, procured from brush manufacturers. All proved to be free from contamination by anthrax spores.

In summing up, anthrax which was formerly considered only an industrial disease, now appears as a menace to men using new cheap shaving brushes. These brushes can be sterilized, however, and made safe. From the fact that in two instances where infection occurred from contaminated shaving brushes, no anthrax organisms could later be demonstrated by laboratory examination from these particular brushes, it would appear that anthrax spores are quite easily dislodged by warm water and soap.

1. Public Health Rpt. U. S. P. H. S., 1919, 34, 994.
2. Jour. Am. Med. Ass. 1921, 76, 667.
3. Jour. Am. Med. Ass. 1920, 75, 1687.
4. Textbook of Bact., Hiss and Zinsser, 3rd ed., p. 85.

EDUCATIONAL ACTIVITIES.

The Division of Laboratories has used every means available in disseminating information concerning the cause of disease, modes by which it is spread and methods by which the spread may be checked. Under the supervision of the Division of Public Health Instruction, members of the division have taken part in various exhibits at fairs and expositions in the State, have given talks on health subjects at medical society meetings, chambers of commerce and clubs, cooperated in school work by supplying culture media and prepared microslides, and furnished articles on laboratory subjects for publication in "Health News." The laboratory has been open for nurses and others interested in laboratory technic and several have taken the opportunity thus afforded in learning the more simple procedures of laboratory diagnosis. During the campaign for pasteurized milk, the chief of the division made several talks on this subject.

COOPERATION.

The laboratories have cooperated in every way possible with Federal, State and local agencies in diagnosing and controlling communicable disease. Both the United States Public Health Service and the United States Veterans Bureau have submitted specimens, especially of blood for the Wassermann test and sputum for tubercule bacilli, from former soldiers. In the Department of Health copies of reports have been furnished to the Division of Communicable Diseases, of Social Hygiene, of Tuberculosis and to the district health superintendents. Interdepartmental cooperation with the Department of Agriculture has been accomplished by examining specimens for the Division of Foods and Dairies and for the chief veterinarian, and with the Department of Welfare by making laboratory examinations for the different State institutions. Twenty-six hundred local health officers have received copies of reports originating in their localities. Local laboratories have received culture media, strains of bacteria, especially typhoid and paratyphoid for agglutination purposes, positive and negative serum for control of Wassermann and other seriological work and various other supplies. It has always been the policy to give local laboratories every

assistance possible since upon such laboratories should come the brunt of public health work.

COST OF LABORATORY WORK.

In the report for a year ago it was shown that the laboratories did more than a half million dollars worth of business with a saving to the State of Illinois of \$427,000.00. During the last year the distribution of diphtheria antitoxin increased 25 per cent and toxin-antitoxin was added to the list. The examination of laboratory cultures increased 53 per cent. The total value therefore of the work performed by the laboratories is estimated as amounting to nearly seven hundred thousand dollars with a saving to the State of Illinois for the closing year of more than a half million dollars. This has been accomplished on an appropriation of less than one hundred thousand dollars.

Two factors are concerned in the increased efficiency of the laboratories. First, the recent contracts made for biological products are considerably lower than former ones. It will be noted that while last year, 60,409 packages of antitoxin cost \$57,347, this year 75,814 packages cost 54,959. The second factor is the decreasing cost of laboratory examinations through increased efficiency of the personnel. While the laboratory force has been increased very materially in the last four years, with increases in salary, the cost of examination per specimen has dropped from 81 cents in 1917 to 31 cents in 1922.

COST OF EXAMINING SPECIMENS AT STATE LABORATORIES.

	Total examinations.	Total expenditures.	Cost per examination.
1921-22.....	92,082	\$29,290	\$0 31
1920-21.....	56,969	19,466	0 32
1919-20.....	34,906	17,492	0 50
*1917-19.....	25,560	20,894	0 81
**1906.....	2,370	2,939	1 23

* Biennium.

** Calendar year.

It is interesting to compare the cost of maintaining the State Department of Health laboratory in Illinois with similar laboratories in other states. An accompanying table compiled by the secretary of the conference of State and Provincial Health Officers of North America, shows that while Illinois is the third state in population in the country, it is tenth in the money expended for health department laboratory work and eighteenth in the per capita tax on the population of the State for laboratory work. Rhode Island is the highest with \$0.0546 and Arkansas is lowest with \$0.0022. In this table is to be noted that the laboratory work of the Division of Sanitation is included

with these procedures but the laboratory work paid for from funds of the Division of Social Hygiene is not included.

LABORATORY ACTIVITIES 1921.

	Cost of main taining State Laboratory.	Per cent of State Depart- ment of Health appropria- tion.	Per capita tax on population of State	Entire State health work done in one laboratory.	Number of branch laboratories.	Total Number of specimens handled in 1921.
Alabama.....	\$ 10,000	64	.004		3	16,240
Arizona.....	6,230			Yes		1,370
Arkansas.....	4,000	7.5	.0022	Yes		11,000
California.....	130,557				5	
Colorado.....	10,000				2	
Connecticut.....	25,000	20	.018	Yes		43,870
Delaware.....	10,000	36	.047	Yes		6,295
District of Columbia.....	16,110	7	.035	Yes		29,678
Florida.....	25,000	15	.025		4	66,804
Georgia.....	20,000	25	.006	Yes		29,600
Idaho.....	5,000	15			1	7,200
Illinois.....	33,466	17	.0051		6	62,797
Indiana.....					5	
Iowa.....	43,000			Yes		62,000
Kansas.....				No		23,756
Kentucky.....	28,000	40			2	40,908
Louisiana.....	32,194	33	.017		4	29,262
Maine.....	12,000	13.5	.015	Yes		17,500
Maryland.....	16,138	11.1	.0104		2	23,000
Massachusetts.....	176,714	45	.045		6	107,503
Michigan.....	75,000	27			2	141,869
Minnesota.....					1	109,134
Mississippi.....	30,000	17	.023	Yes		6,000
Missouri.....				Yes		11,317
Montana.....	18,010	31	.033		1	9,786
Nebraska.....	9,661	20	.008	Yes		
Nevada.....	11,603		.15	Yes		
New Hampshire.....	15,500	37	.035		1	
New Jersey.....	42,374	11.2	.0133	Yes		48,034
New Mexico.....	4,423	21.9	.012	Yes		7,784
New York.....	431,000	50			1	110,935
North Carolina.....	65,000			Yes		31,000
North Dakota.....	15,000				3	18,000
Ohio.....	52,555	16	.01	Yes		76,551
Oklahoma.....						
Oregon.....	3,187		.0045	Yes		10,564
Pennsylvania.....	50,226			Yes		66,397
Rhode Island.....	33,000	43.6	.0546	Yes		28,303
South Carolina.....	11,969	7	.007	Yes		3,234
South Dakota.....						
Tennessee.....	11,820	100			1	
Texas (1920 Q. A.).....	3,100			Yes		3,418
Utah.....	5,900		.013	No		2,315
Vermont.....	18,000	21	.05	Yes		17,403
Virginia.....	12,000	0.922	.0048	Yes		20,000
Washington.....				Yes		
West Virginia.....	10,000	14.3	.0067	Yes		11,482
Wisconsin.....					7	43,507
*Wyoming.....						

* Maintains no state laboratory.

TOTAL LABORATORY SPECIMENS AND SPECIMENS PER 1,000 POPULATION SUBMITTED FROM THE VARIOUS COUNTIES.

County.	Population.	Number of specimens received.	Specimens per 1,000 population.
Adams.....	62,188	536	8.6
Alexander.....	23,980	662	28.7
Bond.....	16,045	193	12.06
Boone.....	15,322	95	6.3
Brown.....	9,336	49	5.4
Bureau.....	42,648	1,336	31.8
Calhoun.....	8,245	16	1.9
Carroll.....	19,345	124	6.5
Cass.....	17,896	305	17.9
Champaign.....	56,259	1,729	30.8
Christian.....	38,458	606	15.9
Clark.....	21,165	442	21.04
Clay.....	17,687	775	45.5
Clinton.....	22,947	104	4.7
Coles.....	35,108	3,065	87.5
Cook.....	3,053,017	5,106	1.6
Crawford.....	22,771	80	3.6
Cumberland.....	12,858	37	3.8
DeKalb.....	31,339	767	24.7
DeWitt.....	19,252	994	52.3
Douglas.....	19,604	1,116	58.7
DuPage.....	42,120	215	5.1
Edgar.....	25,769	790	31.2
Edwards.....	9,431	572	63.5
Effingham.....	19,556	236	12.4
Fayette.....	26,187	51	1.9
Ford.....	19,466	94	4.9
Franklin.....	57,293	736	12.9
Fulton.....	48,163	656	13.6
Gallatin.....	12,856	21	1.7
Greene.....	22,883	1,009	45.8
Grundy.....	18,580	74	4.1
Hamilton.....	15,920	3	0.2
Hancock.....	28,523	598	21.3
Hardin.....	7,533	12	1.7
Henderson.....	9,770	41	45.5
Henry.....	45,161	361	8.02
Iroquois.....	34,841	289	8.5
Jackson.....	37,091	650	17.8
Jasper.....	16,064	139	8.6
Jefferson.....	28,480	304	10.8
Jersey.....	12,682	88	7.3
JoDavies.....	21,917	114	5.4
Johnson.....	12,022	57	4.7
Kane.....	99,499	5,362	54.1
Kankakee.....	44,940	726	16.5
Kendall.....	10,074	24	2.4
Knox.....	46,727	2,028	44.08
Lake.....	92,925	3,000	32.6
LaSalle.....	74,285	1,500	20.2
Lawrence.....	21,380	1,378	65.6
Lee.....	28,004	144	5.1
Livingston.....	39,070	1,182	30.3
Logan.....	29,562	1,142	39.3
McDonough.....	27,074	504	18.6
McHenry.....	33,164	302	9.1
McLean.....	70,107	1,229	17.5
Macon.....	65,175	4,180	64.3
Macoupin.....	57,274	900	15.7
Madison.....	106,895	2,419	22.8
Marion.....	37,497	617	16.6
Marshall.....	14,760	178	12.7
Mason.....	16,634	2,185	136.5
Massac.....	13,559	122	9.3
Menard.....	11,694	64	5.8
Mercer.....	18,800	134	7.4
Monroe.....	12,839	45	3.7
Montgomery.....	41,403	676	16.4
Morgan.....	33,567	2,317	70.2
Moultrie.....	14,839	98	7.0
Ogle.....	26,830	119	4.5
Peoria.....	111,710	2,755	24.8
Perry.....	22,901	367	16.6
Piatt.....	15,714	174	10.5

TOTAL LABORATORY SPECIMENS AND SPECIMENS PER 1,000 POPULATION SUBMITTED FROM THE VARIOUS COUNTIES—Concluded.

County.	Population.	Number of specimens received.	Specimens per 1,000 population.
Pike.....	26,866	286	11.0
Pope.....	9,625	17	1.8
Pulaski.....	14,629	88	6.2
Putnam.....	7,579	26	3.7
Randolph.....	29,109	278	9.5
Richland.....	14,044	134	9.5
Rock Island.....	92,297	1,887	20.4
Saline.....	38,553	459	12.07
Sangamon.....	100,262	6,661	66.6
Schuyler.....	13,285	88	6.7
Scott.....	9,489	31	3.4
Shelby.....	29,601	194	6.6
St. Clair.....	136,530	1,952	14.3
Stark.....	9,693	23	2.5
Stephenson.....	37,743	769	20.7
Tazewell.....	38,540	364	9.5
Union.....	20,249	140	7.0
Vermilion.....	86,162	1,562	18.1
Wabash.....	14,034	107	7.6
Warren.....	21,488	254	12.09
Washington.....	18,035	326	18.1
Wayne.....	22,722	92	4.1
White.....	20,081	91	4.5
Whiteside.....	36,174	247	6.8
Will.....	92,911	324	3.5
Williamson.....	61,092	521	8.5
Winnebago.....	90,929	1,329	14.7
Woodford.....	19,340	185	9.7

DIVISION OF SOCIAL HYGIENE.

C. C. COPELAN, M. D., *Chief.*

The Division of Social Hygiene, continuing in its function to suppress, control and eradicate venereal diseases, has completed its fourth year of operation. The division since its creation July 1, 1918, has endeavored to proceed along lines which conform in general to the venereal disease program suggested by the Interdepartmental Social Hygiene Board. The original objectives were to interest the lay public in the serious nature of venereal diseases, their prevalence and their influence upon the economic life to the community; to spread the hope of relief offered by scientific treatment, and to establish free clinics where diseased persons unable to pay for private treatment may be rendered non-infectious. In an effort to arouse the interest of the public, male and female lecturers have been employed. Films, slides and exhibits recommended by the U. S. Public Health Service have been used to make the lectures more effective and interesting.

The following editorial which appeared in the *Social Hygiene Monthly* for April, 1922, is a brief resume of the very successful conference on venereal diseases held in Chicago, March 13-18, 1922:

The Venereal Disease Institute conducted under the auspices of the United States Public Health Service and the Illinois Department of Public Health in Chicago, March 13-18, more than justified the splendid attendance of over one thousand persons.

The audience was composed of representatives from every walk of life and included doctors, nurses, educators, social workers, judges, business men, mothers of families, clearly showing that the efforts to arouse interest in the subject of venereal disease had been successful.

Generally the scientific course is of interest only to doctors, but on this occasion the lecturers recognizing that a general knowledge of the medical side of venereal diseases is necessary to those who would fight it, so presented the subject that it could be grasped by all in attendance.

Of special interest to clinic directors and educators were the lectures given on 'Methods of Health Education' and 'Clinic Management.' This department has made unusual progress during the past year, the demand for standardized work in this field being very insistent.

One of the best features of the program was the series of noon-day luncheons, at which prominent representatives of the various agencies interested in combatting venereal disease, presented their views as to how best the work could be carried on. The church, Institute for Juvenile Research, newspaper, city and state, were represented and suggestions were given which will be of inestimable value if put into practice in the different communities.

A striking feature of the Institute was the changed attitude of the audience. But a short time ago it was impossible to frankly discuss social diseases and allied subjects before so varied an audience, but those present at the Conference showed by their whole attitude that the time has come when it is no longer necessary to veil the matter under a cloak of false modesty, but that it can be approached with unaffectedness and ease. If those who attended this Conference will carry with them a determination to cultivate this attitude in their own communities, much of the prejudice and repugnance now felt in regard to this subject will be overcome.

It is to be hoped that such a conference will be held annually for the attendance of the registrants and their interest very clearly demonstrated the public demand for instruction and education in Social Hygiene and Venereal Diseases.

One of the points stressed at the conference was the need for a strenuous campaign to secure the cooperation of the physicians in reporting venereal disease cases. The results of this campaign have been most gratifying as there have been marked increases in the number of physicians reporting and in the number of reports received, since the conference.

TREATMENT OF VENEREAL DISEASES.

In dealing with venereal diseases it is doubly important that all victims receive adequate treatment. Every person with a venereal disease is not only a victim needing individual relief, but is a potential carrier of the disease to others. For the sake of community protection, therefore, all means must be used to extend accessible, prompt and scientific treatment to every infected person.

Syphilis and gonorrhea are caused by germs. It therefore follows that if begun promptly, there is a definite curative treatment which is usually successful. The most disastrous results come from delayed or improper treatment. Both diseases are communicable, usually through sexual intercourse. Many men and some women marry while infected with a venereal disease. In this way the disease is transmitted to innocent persons within the family. The germs, especially the syphilis germs, are occasionally spread by other means than sexual intercourse, i. e., kissing, drinking cup, etc. Gonorrhea causes blindness among infants and numerous surgical operations on women. Syphilis is a frequent cause of locomotor ataxia, other forms of paralysis, paresis or softening of the brain, insanity, miscarriages, diseases of the heart, liver, blood vessels and other organs.

Free clinics for the treatment of indigents afflicted with venereal diseases in operation at the close of the fiscal year are located at Alton, Cario, Carlinville, five in Chicago, Chicago Heights, Decatur, East St. Louis, Litchfield, Moline, Peoria, Princeton, Quincy, Rockford, Rock Island, Springfield and West Hammond.

The work accomplished at these clinics during the year is summarized as follows:

Patients remaining under treatment July 1, 1921.....	2,393
New patients admitted during the year.....	10,001
Old patients readmitted during the year.....	1,686
Total number of individual patients treated.....	14,080
Patients hospitalized.....	1,481
Number of patients discharged as cured and probably cured.....	4,610
Number of patients discharged as non-infectious.....	3,407
Number of patients discontinuing treatment.....	2,882
Number of patients placed in detention.....	191
*Total number of cases treated.....	44,475
Total number treatments administered (including arsphenamine).....	167,344
Total number of Wasserman tests.....	18,126
Total number of microscopic examination for the <i>Treponema pallidum</i>	1,342
Total number of microscopic examination for the gonococcus.....	14,327
Total number doses arsphenamine administered.....	31,413
Total number ampules arsphenamine distributed by division.....	23,773

*This sets forth the number of cases of disease treated during each month and includes the carried-over cases.

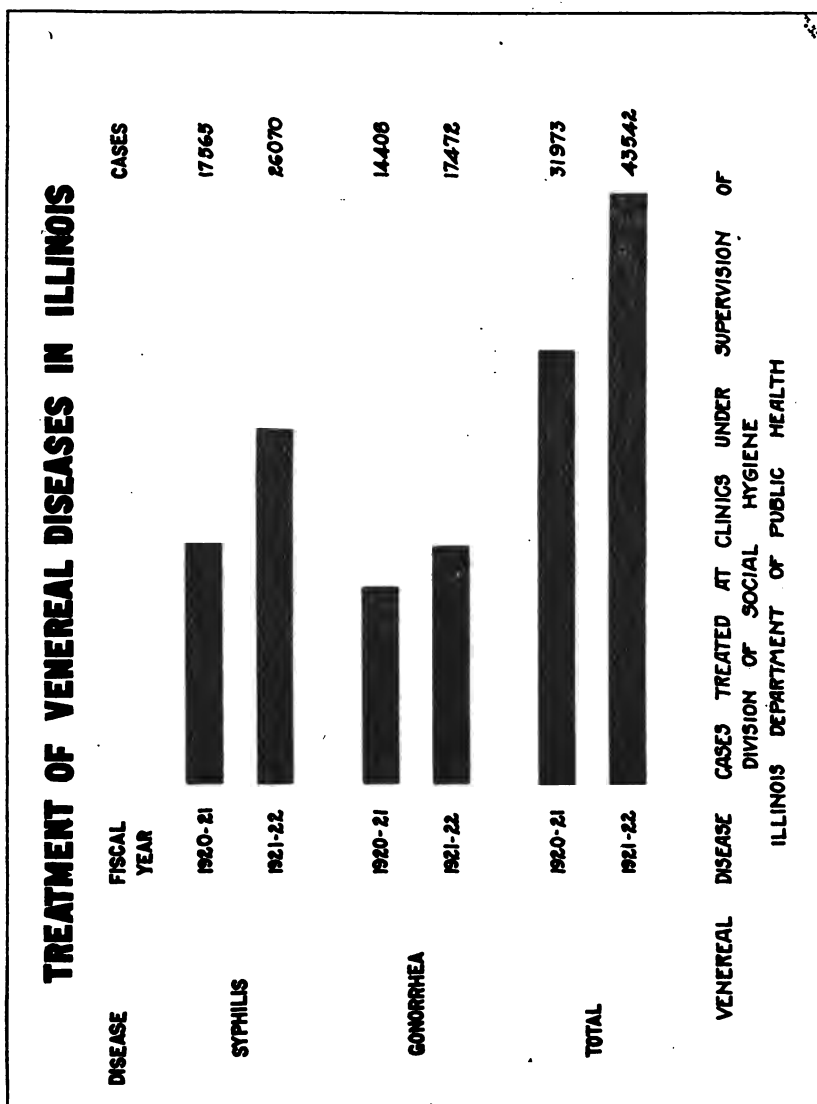


Figure 48.

At the close of the fiscal year, June 30, 1921, there was a total of 2,393 patients under treatment at the 26 clinics then reporting to the Division of Social Hygiene. At the close of the fiscal year just ending, there was a total of 3,181 patients remaining under treatment at the twenty-nine clinics now reporting. There was also a net increase of 10,909 cases treated at the clinics during the year, as indicated by a compilation of monthly figures.

The accompanying chart, indicates the increase in the number of syphilis and gonorrhea cases treated at the clinics.

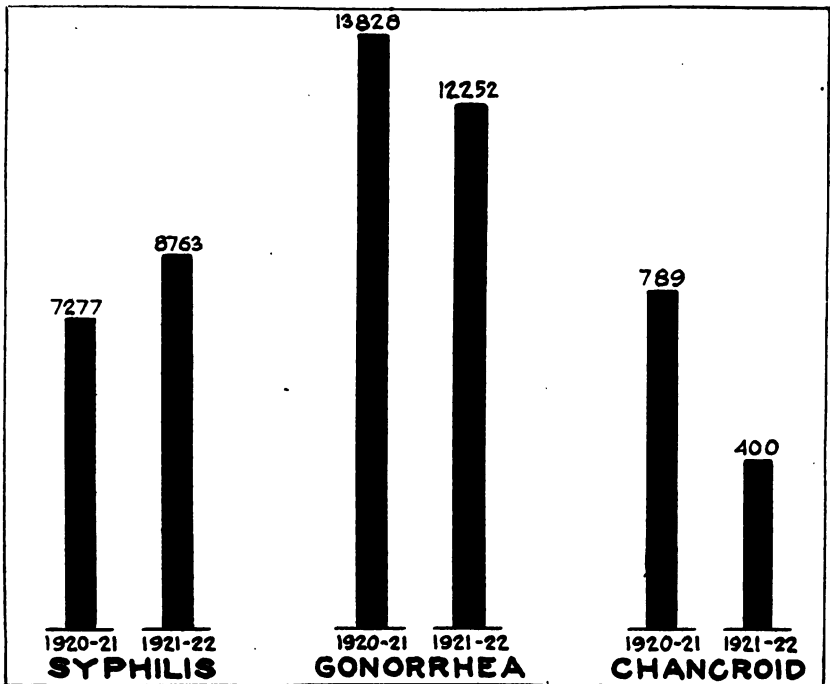


Figure 49.—Venereal disease cases reported to the Illinois Department of Public Health for the fiscal years ending June 30, 1921 and 1922.

The following is a tabulation of data taken from the 6,177 venereal disease reports received by the Illinois Department of Public Health for the year ending June 30, 1922.

THE DEPARTMENT OF HEALTH

	Communicable Diseases	Non-Communicable Diseases	Total
1. Tuberculosis	1,000	1,000	2,000
2. Syphilis	500	500	1,000
3. Gonorrhea	200	200	400
4. Venereal diseases	100	100	200
5. Diphtheria	50	50	100
6. Pertussis	30	30	60
7. Measles	20	20	40
8. Rubella	10	10	20
9. Mumps	10	10	20
10. Polio	5	5	10
11. Typhoid	5	5	10
12. Cholera	5	5	10
13. Dysentery	5	5	10
14. Typhus	5	5	10
15. Smallpox	5	5	10
16. Measles	5	5	10
17. Rubella	5	5	10
18. Mumps	5	5	10
19. Polio	5	5	10
20. Typhoid	5	5	10
21. Cholera	5	5	10
22. Dysentery	5	5	10
23. Typhus	5	5	10
24. Smallpox	5	5	10
25. Measles	5	5	10
26. Rubella	5	5	10
27. Mumps	5	5	10
28. Polio	5	5	10
29. Typhoid	5	5	10
30. Cholera	5	5	10
31. Dysentery	5	5	10
32. Typhus	5	5	10
33. Smallpox	5	5	10
34. Measles	5	5	10
35. Rubella	5	5	10
36. Mumps	5	5	10
37. Polio	5	5	10
38. Typhoid	5	5	10
39. Cholera	5	5	10
40. Dysentery	5	5	10
41. Typhus	5	5	10
42. Smallpox	5	5	10
43. Measles	5	5	10
44. Rubella	5	5	10
45. Mumps	5	5	10
46. Polio	5	5	10
47. Typhoid	5	5	10
48. Cholera	5	5	10
49. Dysentery	5	5	10
50. Typhus	5	5	10
51. Smallpox	5	5	10
52. Measles	5	5	10
53. Rubella	5	5	10
54. Mumps	5	5	10
55. Polio	5	5	10
56. Typhoid	5	5	10
57. Cholera	5	5	10
58. Dysentery	5	5	10
59. Typhus	5	5	10
60. Smallpox	5	5	10
61. Measles	5	5	10
62. Rubella	5	5	10
63. Mumps	5	5	10
64. Polio	5	5	10
65. Typhoid	5	5	10
66. Cholera	5	5	10
67. Dysentery	5	5	10
68. Typhus	5	5	10
69. Smallpox	5	5	10
70. Measles	5	5	10
71. Rubella	5	5	10
72. Mumps	5	5	10
73. Polio	5	5	10
74. Typhoid	5	5	10
75. Cholera	5	5	10
76. Dysentery	5	5	10
77. Typhus	5	5	10
78. Smallpox	5	5	10
79. Measles	5	5	10
80. Rubella	5	5	10
81. Mumps	5	5	10
82. Polio	5	5	10
83. Typhoid	5	5	10
84. Cholera	5	5	10
85. Dysentery	5	5	10
86. Typhus	5	5	10
87. Smallpox	5	5	10
88. Measles	5	5	10
89. Rubella	5	5	10
90. Mumps	5	5	10
91. Polio	5	5	10
92. Typhoid	5	5	10
93. Cholera	5	5	10
94. Dysentery	5	5	10
95. Typhus	5	5	10
96. Smallpox	5	5	10
97. Measles	5	5	10
98. Rubella	5	5	10
99. Mumps	5	5	10
100. Polio	5	5	10

cases
fiscal

pressi
point
just
ethical
profe
tunil
carr
supp
flea

visi
Nam
Nam
Nam

An accompanying chart, shows the number of venereal disease cases reported to the Illinois Department of Public Health for the fiscal years ending June 30, 1921 and 1922 respectively.

REPRESSIVE ACTIVITIES.

From the social viewpoint there are weighty reasons for the suppression of all irregular sex intercourse. From the public health viewpoint every reduction of the amount of irregular sex intercourse means just so much less exposure to venereal diseases. One of the most efficacious methods of reducing these exposures is the preventing of professional prostitutes and loose women of all kinds from any opportunity to carry on their business. These women are the most prolific carriers of venereal diseases. Law enforcement effective enough to suppress commercialized prostitution requires that county and city officials enlist in the fight.

The following is a summary of the suppressive activities of the division during the year:

Number of city ordinances passed during period.....	3
Number of vice investigations.....	35
Number sources of infection investigated and placed under treatment.....	884

EDUCATIONAL WORK.

Venereal diseases are spread largely because of ignorance concerning them. If the public would be impressed with the facts as known to the medical profession regarding the disastrous effect upon life and health because of these diseases, people generally would unite in one movement to free themselves. Education is then one of the most important and fundamental ways of preventing venereal diseases. Both gonorrhea and syphilis will be much easier to control when husbands learn the terrible effects of these diseases upon women and children; when men learn that practically all loose women are infected with these diseases.

Following is a summary of the educational work carried on during the year:

Number of lectures and addresses given.....	179	
Attendance.....		74,010
Number of days slides and charts shown.....	622	
Attendance.....		73,009
Number film showings without lecture.....	182	
Attendance.....		48,349
Number of requests for pamphlets received.....		3,209
Number of pamphlets distributed.....		240,898
(a) In response to specific requests.....	113,244	
(b) By circularizing mailing lists.....	97,488	
(c) To clinics, lectures, field workers.....	30,166	
Number of pamphlets purchased.....		119,349
Number of pamphlets received from U. S. P. H. S.....		15,000
Number of exhibits purchased.....		9
Publicity material—number of references to venereal disease work noted in newspapers and magazines.....		165

	Gonorrhea.	Syphilis.	Chancroid.	Total.
Age—				
1-12.....	41	46	-----	87
12-16.....	60	40	2	102
16-20.....	593	258	13	864
20-30.....	2,159	1,037	81	3,277
30-40.....	641	537	27	1,205
40-50.....	157	286	2	445
50 and over.....	61	131	5	197
				*6,177
Sex—				
Male.....	2,853	1,454	126	4,433
Female.....	859	881	4	1,744
				6,177
Color—				
White.....	3,483	2,102	127	5,712
Black.....	229	233	3	465
				6,177
Social status—				
Single.....	2,607	1,147	113	3,867
Married.....	882	979	12	1,873
Widowed.....	81	94	3	178
Divorced.....	142	115	2	259
				6,177
Place—				
City.....	2,742	1,766	95	4,603
Town.....	970	569	35	1,574
				6,177
Occupation—				
Clerk.....	305	95	14	414
Waiter or cook.....	49	45	1	95
Miner.....	208	246	13	467
Laborer.....	1,247	580	51	1,878
Farmer.....	153	84	9	246
Mechanic.....	156	81	7	244
Business man.....	160	65	5	230
Miscellaneous.....	726	623	14	1,363
Prostitute.....	66	65	2	133
Idle.....	642	451	14	1,107
				6,177
Laboratory findings—				
Positive.....	2,808	2,053	72	4,933
Negative.....	40	21	15	76
None.....	864	261	43	1,168
				6,177
Residence—				
Boarding house.....	807	353	32	1,194
Home.....	2,662	1,801	95	4,558
Hospital.....	75	43	2	120
Hotel.....	66	49	1	116
Institution or jail.....	102	87	-----	189
				6,177
Source of infection—				
Contracted.....	3,145	2,106	109	5,360
Inherited.....	567	229	21	817
				6,177
Investigated.....				764
Stage—				
Primary or acute.....	2,439	807	102	3,348
Secondary or subacute.....	430	594	18	1,042
Tertiary or chronic.....	843	934	10	1,787
				6,177
Discontinued employment.....	663	406	5	1,074
Handling food stuffs.....	47	59	1	107
Patients under treatment.....	3,712	2,335	130	6,177

* Only reports giving complete data were tabulated.

An accompanying chart, shows the number of venereal disease cases reported to the Illinois Department of Public Health for the fiscal years ending June 30, 1921 and 1922 respectively.

REPRESSIVE ACTIVITIES.

From the social viewpoint there are weighty reasons for the suppression of all irregular sex intercourse. From the public health viewpoint every reduction of the amount of irregular sex intercourse means just so much less exposure to venereal diseases. One of the most efficacious methods of reducing these exposures is the preventing of professional prostitutes and loose women of all kinds from any opportunity to carry on their business. These women are the most prolific carriers of venereal diseases. Law enforcement effective enough to suppress commercialized prostitution requires that county and city officials enlist in the fight.

The following is a summary of the suppressive activities of the division during the year:

Number of city ordinances passed during period.....	3
Number of vice investigations.....	35
Number sources of infection investigated and placed under treatment.....	884

EDUCATIONAL WORK.

Venereal diseases are spread largely because of ignorance concerning them. If the public would be impressed with the facts as known to the medical profession regarding the disastrous effect upon life and health because of these diseases, people generally would unite in one movement to free themselves. Education is then one of the most important and fundamental ways of preventing venereal diseases. Both gonorrhea and syphilis will be much easier to control when husbands learn the terrible effects of these diseases upon women and children; when men learn that practically all loose women are infected with these diseases.

Following is a summary of the educational work carried on during the year:

Number of lectures and addresses given.....	179	
Attendance		74,010
Number of days slides and charts shown.....	622	
Attendance		73,009
Number film showings without lecture.....	182	
Attendance		48,349
Number of requests for pamphlets received.....		3,209
Number of pamphlets distributed.....		240,898
(a) In response to specific requests.....	113,244	
(b) By circularizing mailing lists.....	97,488	
(c) To clinics, lectures, field workers.....	30,166	
Number of pamphlets purchased.....		119,349
Number of pamphlets received from U. S. P. H. S.....		15,000
Number of exhibits purchased.....		9
Publicity material—number of references to venereal disease work noted in newspapers and magazines.....		165

SUMMARY OF CLINIC ACTIVITIES—JULY 1, 1921, JUNE 30, 1922.

Name of clinic.	Number of cases treated.			Total.	Doses arsphena- mine ad- ministered.
	Syphilis.	Gonorrhea.	Chancroid.		
Alton Social Hygiene.....	969	384	4	1,357	400
Chicago Heights V. D.....	128	48		176	185
Carlville, Macoupin Co. V. D.....	546	251	23	820	430
Decatur, Macon Co. V. D.....	1,578	598		2,176	974
East St. Louis Social Hygiene.....	379	440	16	835	565
Litchfield Municipal V. D.....	316	359	4	679	183
Moline, Municipal V. D.....	408	371	61	840	1,024
Peoria, Municipal V. D.....	865	305	33	1,203	1,433
Rockford, Municipal V. D.....	187	189		376	354
Rock Island, Rock Island Co. V. D.....	442	381	6	829	1,456
Springfield, Sangamon Co. V. D.....	1,671	372	22	2,065	1,818
West Hammond, U. S. P. H. S.—V. D.....	101	410	129	640	131
	7,590	4,108	298	11,996	8,953
Cairo, V. D.....	1,171	195	24	1,390	1,120
Princeton V. D.....	20	12		32	45
Quincy, Social Hygiene.....	134	123	3	260	317
	1,325	330	27	1,682	1,491
	8,915	4,438	325	13,678	10,444
South Side Dispensary.....	1,864	346	26	2,235	2,943
Sedgwick Dispensary.....	684	682	16	1,362	1,218
Stock Yards Clinic.....	582	527	14	1,123	685
Racine Ave. Dispensary.....	651	754	20	1,425	1,068
Grand Crossing Clinic.....	788	390		1,178	813
Lawndale Hospital.....	846	1,043	38	1,927	1,997
Frances Juvenile Home.....	151	147		298	133
House of Correction.....	625	637	80	1,342	929
University of Illinois Clinic.....	383	597	25	1,005	320
Central Free Dispensary.....	6,813	4,041	84	10,938	3,267
Mercy Dispensary.....	353	559	14	926	494
Illinois Social Hygiene League.....	2,671	2,285	127	5,083	4,778
	16,390	12,008	444	28,842	18,645
*Cook Co. Hospital.....	609	980	163	1,752	2,175
†Provident Dispensary.....	30	7	1	38	56
†Michael Reese Dispensary.....	126	39		165	93
	765	1,026	164	1,955	2,324
	17,155	13,034	608	30,797	20,969

* In operation for 6 months only.

† In operation for 3 months only.

RECAPITULATION OF CLINIC SUMMARY—JULY 1, 1921, JUNE 30, 1922.

	Number of cases treated.			Total.	Doses arsphena- mine ad- ministered.
	Syphilis.	Gonorrhea.	Chancroid.		
Total for Chicago Clinic.....	17,155	13,034	608	30,797	20,969
Total for Downstate Clinic.....	8,915	4,438	325	13,678	10,444
Grand total for entire State.....	26,070	17,472	933	44,475	31,413
Grand total for entire State.....	17,565	14,408	1,593	33,566	27,634
Increase.....	8,505	3,064	*660	10,909	3,777

* Decrease.

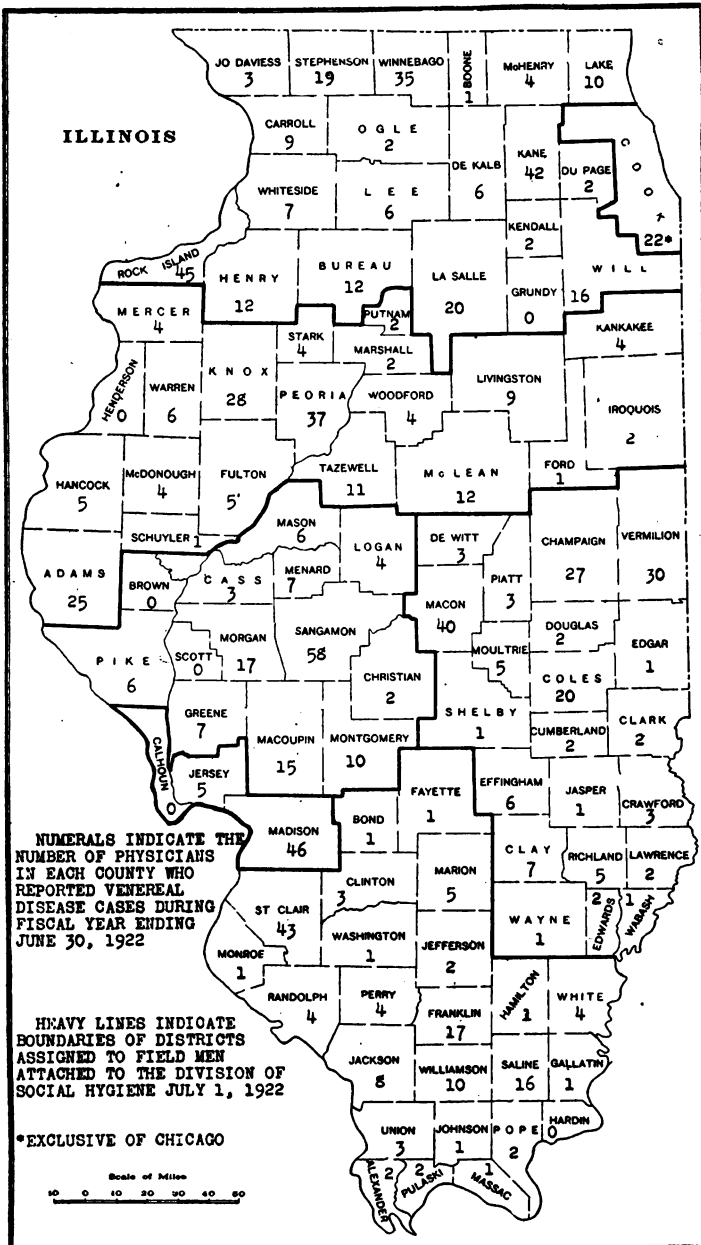


Figure 50.

DIVISION OF LODGING HOUSE INSPECTION.

WM. W. McCULLOUGH, *Superintendent.*

The Division of Lodging House Inspection is charged, under the provisions of the State Board of Health Act, together with rules and regulations prescribed by the Director of the Department of Public Health, with the supervision and control of certain sanitary features of lodging houses, boarding houses, taverns, inns and hotels in cities of 100,000 population or over. On account of this limitation as to population, the activities of the division are confined to the city of Chicago, where an office is maintained at 130 North Wells Street.

The specific duties of the division have been outlined in previous reports to the department. They have to do with improving the sanitary conditions in lodging houses, boarding houses, taverns, inns and hotels.

Under the laws and other regulations the beds in rooms offered for rent to lodgers and guests must be so arranged as to leave a passageway of not less than two feet horizontally on all sides of each bed; and all beds shall be so arranged that under each of them the air may freely circulate, thus providing for adequate ventilation.

As in the past, a consistent effort has been maintained constantly to improve the conditions in all houses inspected. The inspectors are instructed to be on the alert in making inspections to do constructive and corrective work. All violations of law reported by inspectors and complaints received by this division are carefully considered, and in most cases an investigation is made to discover their cause. In cases where inspectors find legal violations, the division takes immediate steps to enforce the law. Since July 1, 1921, 122 written notices have been served by the inspectors on the proprietors of houses where a violation was found, directing that the management put the premises in sanitary condition and otherwise comply with the State Board of Health Act. In all these cases, reinspections since the serving of such notices, show that the violations formerly complained of have been corrected.

There is now on file the following complete list of houses classified as hotels, lodging houses and boarding houses all of which have been inspected and measured:

Hotels	Lodging Houses	Boarding Houses	Totals
507	5,805	176	6,488

During the period covered by this report, the number of lodging houses, boarding houses, taverns, inns and hotels reported as having

gone out of business is 159, the number vacant 76, and the number torn down 29.

Since July 1, 1921, the number of lodging houses, boarding houses, taverns, inns and hotels measured and inspected is as follows:

	Measured.	Re-measured.
1921—		
July.....	41	26
August.....	24	4
September.....	47	24
October.....	116	79
November.....	104	66
December.....	33	17
1922—		
March.....	4	2
April.....	26	13
May.....	7	4
June.....	33	8
Total.....	435	243

In these houses the total number of rooms is 15,243; the number of lodgers is 11,117 while the present capacity is 19,172 and the legal capacity, 38,620.

The following tabulation shows the number of lodging houses, boarding houses, taverns, inns and hotels in which supplemental inspections have been made, giving the number of rooms inspected, number of lodgers at time of inspection and the number of lodgers for which there were sleeping accommodations:

	Supplemental inspections.	Rooms.	Lodgers.	Present capacity.
1921—				
July.....	142	2,624	1,794	3,634
August.....	141	3,812	2,701	5,234
September.....	148	2,599	1,717	3,328
October.....	84	1,588	1,021	2,001
November.....	127	1,985	1,194	2,682
December.....	245	14,746	12,219	18,580
1922—				
January.....	6	204	189	500
February.....	1	10	8	11
March.....	40	799	614	921
April.....	113	2,530	2,065	3,598
May.....	14	258	156	348
June.....	28	418	292	554

In January and February, 1922, the inspectors served 6,338 printed notices on the proprietors or managers of lodging houses, boarding houses, taverns, inns and hotels to file the sworn statement required to be filed with the county clerk March first each year. At the time notices were served there were residing in these houses 110,748 lodgers.

In April, May and June, 1922, the inspectors served 2,294 second or final notices on such proprietors or managers, who had failed to file the required sworn statement. The inspectors found 28,089 lodgers in these houses when notices were served. As provided by the State Board

